Canada

MANAGEMENT OF CANADIAN RAMSAR SITES

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This document *Management of Canadian Ramsar Sites* has been produced as one of a series of Canadian Ramsar Network working reports to provide information to Ramsar site managers and decision makers involved in the implementation of the Ramsar Convention within Canadian jurisdictions. The report provides a general overview of management plans for Ramsar sites in Canada. It also gives background information on the management recommendations developed by the Fourth and Fifth Meetings of the Conference of the Contracting Parties to the Ramsar Convention.

Copies of this report are available from:

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Canadian Wildlife Service
Environment Canada
Ottawa, Ontario
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Compiled by C.D.A. Rubec

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Water and Habitat Conservation Branch
Canadian Wildlife Service
Environment Canada

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PREFACE

Ramsar designated sites are an important component of Canada's wetland conservation strategy implemented through the combined cooperative efforts of government and non-government partners across the nation.

This report summarizes the status of the management planning process on each Ramsar site in Canada. During the 1981 to 1994 period, 32 of the world's 650 or so wetland sites of international importance have been designated in Canada. Our Canadian Ramsar sites comprise about one third of the total wetland area designated globally. Hence, Canada has a special interest in ensuring adequate securement, conservation and management of these wetlands both from a national and international perspective. Canadian Ramsar sites also form a significant portion of the network of important wetlands vital to wildlife across North America shared with the United States and Mexico.

In reprinting this report in January 1996, a number of minor editorial errors have been corrected in this text. It should also be noted that a 33rd Canadian Ramsar site, the Mer Bleue Conservation Area, was designated on October 5, 1995 but information on this site is not included in this report.

MANAGEMENT OF CANADIAN RAMSAR SITES

INTRODUCTION

With its accession to the Convention on Wetlands of International Importance in January 1981, Canada accepted a series of fundamental objectives and obligations with regard to this international wetland conservation treaty known as the "Ramsar Convention."

One requirement of the Convention is that the Contracting Parties identify and nominate wetland sites of international importance based on criteria developed by the Convention. As of April 1994, 32 such Ramsar sites have been designated in Canada, distributed among all of our provinces and territories (Table 1). These Canadian sites cover over 13 million ha of wetlands, about 10% of the total wetland area estimated to exist in the nation (National Wetlands Working Group 1988). A *Procedures Manual* for the nomination and designation of Canadian Ramsar sites has recently been published (Environment Canada 1994).

Contracting Parties to the Ramsar Convention have agreed to:

(1) maintain the ecological character of their designated Ramsar sites;

(2) report to the Convention on changes in the ecological character of sites;

(3) secure these sites for long-term conservation through appropriate regulatory or land use management procedures; and

(4) develop management plans for the sites.

Guidance to Contracting Parties on the development of management plans for Ramsar sites has been the subject of several specific documents produced by the meetings of the Conference of the Contracting Parties.

This report describes the guidance provided by the Conference of the Contracting Parties with regard to the management of Ramsar sites. The report also summarizes the status (as of April 1994) of management and management plans for the 32 Ramsar sites in Canada. The analysis is based on material from Ramsar site management agencies across Canada in the *Information Sheet on Ramsar Wetlands* used in the nomination process for each site. Additional material was provided by the Water and Habitat Conservation Branch of the Canadian Wildlife Service in Ottawa.

The objective of this report is to clearly summarize Canada's response and position relative to the Convention's directions and guidance on Ramsar site management.

Table 1: List of Canadian Ramsar Sites

Canada's 32 Ramsar sites (as of August 1994) are distributed among 10 provinces and two territories. The total area designated covers 13 027 468 ha.

Site/Location	Area Designated (ha)	Year Designated
Atlantic Canada		
1. Grand Codroy Estuary	925	1987
2. Malpeque Bay	24 440	1988
3. Chignecto	1 020	1985
4. Musquodoboit Harbour Outer Estuary	1 925	1987
5. Southern Bight, Minas Basin	26 800	1987
6. Mary's Point	1 200	1982
7. Shepody Bay	12 200	1987
8. Tabusintac Lagoon and River Estuary	4 382	1993
Central Canada		
9. Cap Tourmente	2 398	1981
10. Baie de L'Isle-Verte	2 028	1987
11. Lac Saint-François	2 214	1987
12. Long Point	13 730	1982
13. St. Clair	244	1985
14. Polar Bear Provincial Park	2 408 700	1987
15. Southern James Bay	25 290	1987
16. Point Pelee	1 564	1987
Western/Pacific Canada		
17. Delta Marsh	23 000	1982
18. Oak Hammock Marsh	3 600	1987
19. Last Mountain Lake	15 602	1982
20. Quill Lakes	63 500	1982
21. Whooping Crane Summer Range	1 689 500	1982
22. Peace-Athabasca Delta	321 300	1982
23. Hay-Zama Lakes	50 000	1982
24. Beaverhill Lake	18 050	1987
25. Alaksen	586	1982
26. Creston Valley	6 970	1994
Northern Canada		
27. Polar Bear Pass	262 400	1982
28. Queen Maud Gulf	6 278 200	1982
29. Rasmussen Lowlands	300 000	1982
30. McConnell River	32 800	1982
31. Dewey Soper	815 900	1982
32. Old Crow Flats	617 000	1982

SOME COMMON QUESTIONS ABOUT MANAGEMENT OF RAMSAR SITES

Managers of Ramsar sites are frequently asked to respond to questions about the restrictions and requirements imposed by the existence of a Ramsar Convention designation of a wetland site as a wetland of international importance. Some of the common questions and responses follow.

Once designated as a Ramsar site, is the site protected? Designation as a Ramsar site by itself, in Canada, offers no legal protection. Protection generally occurs through other existing mechanisms such as the site's existing status within areas such as national or provincial parks, national wildlife areas, and federal or provincial/territorial bird sanctuaries.

What happens if the Ramsar site is not within a protected area? Some Canadian Ramsar sites lie outside of such protected lands and waters. In these cases, the landowner(s) has made a commitment to the long-term securement of the wetland for conservation objectives. A current example is the Delta Marsh in Manitoba which is secured through agreements with the provincial government for portions of Crown land and with private landowners for other parts of the site.

If Ramsar designation does not provide protection, what value is it? The international character of designation under the Ramsar Convention attracts considerable public and political attention to these areas designated as "wetlands of international importance." Designation signifies acceptance by the landowner of the site's critical values and need for conservation and wise stewardship within the framework of an international network, now exceeding 650 sites in over 80 nations. The site designation includes an international eye on the site's continued ecological health. Public awareness of wetland values as well as support for parallel wetland and wildlife programs is enhanced. Where necessary, support for additional management resources may also follow.

Are hunting and agricultural grazing prohibited in Ramsar sites? The management of some Ramsar sites allows for regulated seasonal hunting within the area. An example is Cap Tourmente in Quebec which is managed in part as a migratory bird sanctuary and in part as a National Wildlife Area. Under federal regulations, a limited number of permits are sold each year for fall hunting of waterfowl and other birds. Grazing and other regulated land uses are also permitted in some Ramsar sites, recognizing that some of the non-wetland areas within the sites can continue to provide products and services of long-term interest to local communities. Hay crops, for instance, are harvested on agricultural land within the boundaries of the Alaksen National Wildlife Area in British Columbia. This hay is sold to help offset site operating costs. Such regulated land uses are part of the site's applicable land use management planning process. Some Ramsar sites include areas of privately-owned lands. Regulated hunting in these and other areas it must be noted is not incompatible with the Ramsar Convention Wise Use Principles and goals for ecosystem conservation.

Who is responsible for Ramsar site management? Who's in charge? The majority (77.8%) of the area of Canadian Ramsar sites lies on federal lands and are managed by federal agencies, in particular the Canadian Wildlife Service and Parks Canada. However, increasingly, co-management arrangements with provincial and non-government agencies are being implemented for particular sites. About 20.2% of Canada's Ramsar designated area lies on provincial lands where management responsibility lies with provincial wildlife and/or natural resource agencies. Examples of the latter include the Tabusintac Lagoon and River Estuary managed by the province of New Brunswick. The Creston Valley Wildlife Management Area in British Columbia lies on provincial land but is managed by a three-party management board representing federal, provincial and non-government interests in this important area. A small percentage (1.2%) of Canada's Ramsar sites lie on non-government properties and involve the cooperation of private landowners such as the Delta Waterfowl Research Station, the Lennox Island Indian Reserve, the Vuntut Gwich'in First Nation, the Anglican Church of Canada, the Island Nature Trust, and various other private groups and individuals.

What management restrictions does the Ramsar Convention impose on a wetland of international importance? The Convention requires that the site to be secured for conservation purposes; that changes in the ecological character by human or natural causes of a site be reported if known; and that an action plan be initiated to restore sites affected by changes identified by Contracting Parties to the Convention.

STATUS OF MANAGEMENT AND MANAGEMENT PLANNING ON CANADIAN RAMSAR SITES

The following sections provide general details on the management of Ramsar sites in Canada, organized by the regional framework of Environment Canada. Management information given for each site includes:

- Political jurisdiction responsible for the site.
- Land tenure of the Ramsar site and the area surrounding the site.
- Conservation measures taken to date to secure the site.
- Additional conservation measures proposed or under consideration.
- Current land use (human activities) permitted on the site and surrounding areas.
- Threats to integrity of Ramsar site and surrounding area.
- Status of preparation of a management plan for the site.
- Name and address of the site's management authority.

The five regions of Environment Canada that form the structure for this report are: (a) the Pacific and Yukon Region comprising British Columbia and Yukon; (b) the Prairie and Northern Region comprising Alberta, Saskatchewan, Manitoba and the Northwest Territories; (c) the Ontario Region comprising the province of Ontario; (d) the Quebec Region comprising the province of Quebec; and (e) the Atlantic region comprising the provinces of New Brunswick, Newfoundland and Labrador, Nova Scotia and Prince Edward Island.

PACIFIC AND YUKON REGION

ALAKSEN, BRITISH COLUMBIA

Jurisdiction: Federal - Environment Canada; Provincial - British Columbia Ministry of Environment, Lands and Parks.

Land Tenure:

(a) Site: The site comprises 586 ha, 300 ha of which includes the Alaksen National Wildlife Area owned by the Government of Canada. An adjacent part is the George C. Reifel Refuge, 280 ha of which is provincial Crown land, 110 ha federal Crown land which in part overlaps with the Alaksen National Wildlife Area; and 11 ha of federal Crown land owned by Transport Canada but also designated and managed as migratory bird sanctuary land. The Reifel Refuge is designated as a Migratory Bird Sanctuary under the *Migratory Birds Convention Act* of 1917. The Reifel Refuge is managed by the Canadian Wildlife Service.

(b) Surrounding Area: The site is surrounded by lands and waters of the Fraser River in a natural state and by diked farmlands.

Conservation Measures Taken: The National Wildlife Area lands are protected under the *Canada Wildlife Act* of 1973. Areas designated as Migratory Bird Sanctuary are protected under regulations of the *Migratory Birds Convention Act* of 1917. Management of the undiked portion of the entire Fraser River delta is within the framework of the multilateral/intergovernmental Fraser River Estuary Management Program which is aimed at sustaining the Delta's natural productivity.

Conservation Measures Proposed: Adjacent intertidal foreshore and riverine islands are currently, or are in the process of being, designated as protected wildlife habitat pursuant to the *British Columbia Wildlife Act* of 1982.

Current Land Use/Activities in:

(a) Site: The farmland portion is protected by dikes and produces crops of potatoes, Indian corn, peas, beans, cabbage and turnips. Control of water levels, agricultural practices, and public access is carried out by Alaksen National Wildlife Area staff. Crops are grown for waterfowl use under share-cropping agreements with local farmers.

(b) Surrounding Area: Farmland and encroaching major urban development surround this area. Management of the undiked portion of the Fraser River Delta is undertaken by the Fraser River Estuary Management Program.

Threats to Integrity of:

(a) Site: Pollution by toxic substances from adjacent areas is a potential threat.

(b) Surrounding Area: Loss of surrounding farmland to urbanization remains a major source of impacts.

Status of Management Plan: A *Management Plan* has been in existence for the Alaksen National Wildlife Area since April 1986. It has been used by Environment Canada to guide management activities of this portion of the Ramsar site since that time. It was determined this plan had become out of date; hence, in 1993, Environment Canada initiated the preparation of a revised plan to reflect current needs, goals and objectives. In May 1993, a draft *Revised Management Plan* covering the Alaksen National Wildlife Area and adjoining George C. Reifel Bird Sanctuary was prepared and circulated to stakeholders. The revised plan has three components: *Management Guidelines*, an *Agricultural Management Plan*, and an *Integrated Management Plan for Wildlife and Agriculture*. Public consultation sessions have been held and a final document reflecting public input is in preparation.

Management Authority: The National Wildlife Area and the Ramsar site are administered by:

Canadian Wildlife Service
Environmental Conservation Branch
Pacific and Yukon Region, Environment Canada
5421 Robertson Rd., RR #1
Delta, British Columbia
V4K 3N2

CRESTON VALLEY WILDLIFE MANAGEMENT AREA, BRITISH COLUMBIA

Jurisdiction: Provincial - British Columbia Department of Environment, Parks and Wildlife.

Land Tenure:

(a) Site: The Creston Valley Wildlife Management Area was dedicated by provincial statute to be preserved in perpetuity for wildlife, and waterfowl in particular. This tenure is considered optimal for protection and conservation of wildlife habitat values.

(b) Surrounding Area: The surrounding lands are made up of a mosaic of private agricultural, commercial and residential lands, and forested uplands owned predominantly by the provincial government.

Conservation Measures Taken: The area is protected by provincial statute, the *Creston Valley Wildlife Management Area Act*. Management practice seeks to optimize the amount and quality of wetland habitat available to waterfowl and other wetland dependent species. This includes water level control, seeding, burning and associated activities.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Current uses on the site are mainly recreational; birdwatching, wildlife viewing, hunting, fishing, canoeing. Some agricultural activity takes place as a management tool.

(b) Surrounding Area: To the east and south, the surrounding area is rich agricultural land, supporting grazing, cereal crops and orchard lands. Lands west of the Creston Valley Wildlife Management Area are dominated by forested slopes, while the main body of Kootenay Lake extends north for over 100 kilometres.

Threats to Integrity of:

(a) Site: The lands within the Creston Valley Wildlife Management Area are under optimal conservation status; there are no perceived threats to the status of this land.

(b) Surrounding Area: There is growing concern, both regionally and nationally, about the spread of invasive plant species. Purple loosestrife (*Lythrum salicaria*) has been identified elsewhere in the Kootenay region, and it seems highly likely that it will encroach into the Creston wetlands at some point in the near future. This species is highly invasive and is a significant threat to native wetland plant communities. Knapweed (*Centaurea* spp.), another invasive exotic, is established in the region, and can displace native vegetation.

Status of Management Plan: The Creston Valley Wildlife Management Area has been in existence for 25 years. In this time, a number of management plans have been developed and applied, including a *Multi-Year Operational Plan* in November 1985 and a *Working Draft Plan for the Next Five Years* prepared in January 1993. In October 1993, a draft report entitled *Creston Valley Wildlife Management Area - A Strategic Plan...the Next 25 Years* was released to the public for comment and consultation.

Management Authority: The area is jointly managed by the Government of British Columbia and the Government of Canada. The three person Board of Directors includes representatives from the two levels of government, and an additional public member.

Creston Valley Wildlife Management Authority
P.O. Box 640
Creston, British Columbia
V0B 1G0

OLD CROW FLATS, YUKON TERRITORY

Jurisdiction: Federal - Indian and Northern Affairs Canada; Territorial - Yukon Department of Renewable Resources; and Native - Vuntut Gwich'in First Nation.

Land Tenure:

(a) Site: Under the terms of the *Vuntut Gwich'in Final Agreement*, which was ratified in 1993, the northern portion of Old Crow Flats will become Vuntut National Park under the administration of the Government of Canada. Of the remainder, part is Settlement Land belonging to the Vuntut Gwich'in First Nation and the rest remains federal Crown land administered by the federal government subject to the *Territorial Lands Act* and Territorial Land Use Regulations.

(b) Surrounding Area: Upon ratification of the *Vuntut Gwich'in Final Agreement*, surrounding lands will be partially federal Crown land and partially private lands of the Vuntut Gwich'in First Nation.

Conservation Measures Taken: Despite the three different land tenures noted above, the land claims agreement under the *Vuntut Gwich'in Final Agreement* also designate the entire area as the Old Crow Flats Special Management Area. This area will be managed to maintain the integrity of the area as one ecological unit, with the conservation of fish and wildlife and wildlife and their habitats, and the protection of the current and traditional uses of the area by the Vuntut Gwich'in as guiding principles for management. Under these principles, a management plan will be prepared jointly by the governments and the Vuntut Gwich'in. It will incorporate a management plan for Vuntut National Park.

Conservation Measures Proposed: The Agreement has been ratified and the necessary legislation has been passed.

Current Land Use/Activities in:

(a) Site: Issue of permits to regulate access for exploration and development are under the Territorial Land Use Regulations. Development assessment legislation will be amended under the terms of the *Vuntut Gwich'in Final Agreement*. The existing moratorium on the exercise of oil and gas rights in the area will continue until such rights are terminated by the federal government. At present, the only significant uses of the area are hunting, fishing and trapping by the residents of Old Crow.

A three-year program of field studies of waterfowl and their habitat on the Old Crow Flats was initiated in 1993. This is a cooperative effort led by the Vuntut Gwich'in First Nation and the Canadian Wildlife Service. It involves additional partners such as

the United States Fish and Wildlife Service and the Pacific Flyway Council. One major goal of these studies is to gather information needed to produce an effective management plan for the area.

(b) Surrounding Area: Hunting, fishing, and trapping are practised by the residents of Old Crow.

Threats to Integrity of:

(a) Site: The provisions of the *Vuntut Gwich'in Final Agreement* will likely ensure that any future activities in the Old Crow Flats Special Management Area will not threaten its integrity as wildlife habitat.

(b) Surrounding Area: Oil exploration has been proposed for the area, and some seismic line construction has occurred. Heavy machinery would possibly damage the ice-retention properties of the shoreline and could lead to draining of the lakes. There are also proposals for the construction of roads and at least one gas pipeline near the area. Disturbance to wildlife may also be caused by the major archaeological and paleontological field programs being carried out or planned. The future security of the area has figured highly in native land claim negotiations between Canada and the native people of the Vuntut Gwich'in First Nation. As noted above, a moratorium on oil and gas exploration in this region continues.

Status of Management Plan: An approved management plan is called for under the terms of the final Land Claim Agreement within five years of the signing of the Agreement. The enabling legislation for this Agreement has been passed; hence, it may be 1999 before this management plan is in effect.

Management Authority: There will be three management authorities on the Old Crow Flats when the *Vuntut Gwich'in Final Agreement* is implemented: Native - the Vuntut Gwich'in First Nation; Federal - Department of Indian and Northern Affairs and Department of Canadian Heritage; Territorial - Government of Yukon. The primary bodies for wildlife management will be the local Renewable Resource Council and the Yukon Fish and Wildlife Management Board which will make recommendations to the appropriate minister. A management plan will provide an umbrella which all three management authorities must adhere to.

PRAIRIE AND NORTHERN REGION

BEAVERHILL LAKE, ALBERTA

Jurisdiction: Provincial - Alberta Department of Environmental Protection.

Land Tenure:

(a) Site: Exposed areas of the lake bed are owned and controlled by the Government of Alberta.

(b) Surrounding Area: Mainly private land holdings.

Conservation Measures Taken: The lake is one of two sites in Canada designated as a "national viewpoint" by the Canadian Nature Federation.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Since the 1930s, much of this Crown land has been leased under a form of agricultural disposition of farmers owning adjacent patented lands. At present, over 90% (5 463 ha) of the land used is under agricultural dispositions, primarily for grazing with haying and cropping and cultivation secondary. The remaining land is disposed to resource development reservations (wildlife habitat, a recreation lease, and natural gas well sites), or is undisposed. Habitat enhancement projects were initiated in 1972 by Ducks Unlimited Canada and Alberta Fish and Wildlife. A dam was constructed to provide optimum water levels for resident waterfowl, and nesting islands were constructed.

In 1973, the lake became a habitat improvement project under the Alberta Fish and Wildlife "Buck for Wildlife" Program. During 1973 meetings were held with local groups and landowners to determine their response to potential habitat protection activities. From 1975 to 1981 a variety of habitat development activities were completed. These included tree planting, food and nest cover plots, pothole blasting, further construction of nesting islands, and fencing to control cattle grazing.

(b) Surrounding Area: Provincial Crown land.

Threats to Integrity of:

(a) Site: Changes in lake level affect the size of the lake.

(b) Surrounding Area: None currently.

Status of Management Plan: In 1981, the *Beaverhill Lake Integrated Resource Plan* was prepared by the province. It provides a policy that will guide the preparation and implementation of the local development plan on a disposition unit basis.

Management Authority:

Fish and Wildlife Services
Alberta Department of Environmental Protection
North Tower, Petroleum Plaza
9945 - 108th Street
Edmonton, Alberta
T5K 2G6

HAY-ZAMA LAKES, ALBERTA

Jurisdiction: Provincial - Alberta Department of Environmental Protection.

Land Tenure:

(a) Site: The area is owned by the Government of Alberta.

(b) Surrounding Area: Mainly privately-held and provincial Crown lands.

Conservation Measures Taken: Hay-Zama Lakes are an Alberta Fish and Wildlife Crown Reservation.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: There is no active management practised specifically for waterfowl at present but future management may include the control of water levels. Fluctuations in levels and resultant goose behaviour seem to determine the degree of waterfowl use in the autumn. Existing oil and gas activity on the wetland is strictly controlled by shut down dates in spring and fall, and any further expansion will be restricted.

(b) Surrounding Area: Provincial Crown land.

Threats to Integrity of:

(a) Site: The area is somewhat isolated from major developments, but a potential threat is future expansion of oil and gas activity.

(b) Surrounding Area: None currently.

Status of Management Plan: A management plan does not exist for this area.

Management Authority:

Fish and Wildlife Services
Alberta Department of Environmental Protection
North Tower, Petroleum Plaza
9945 - 108th Street
Edmonton, Alberta T5K 2G6

PEACE-ATHABASCA DELTA, ALBERTA

Jurisdiction: Federal - Department of Canadian Heritage; Provincial - Alberta Department of Environmental Protection.

Land Tenure:

(a) Site: Most of the Ramsar site is within Wood Buffalo National Park and is owned by the Government of Canada. Fringe areas of the delta lie on provincial Crown land.
(b) Surrounding Area: Provincial Crown land.

Conservation Measures Taken: The site is managed and protected under the regulations of the *National Parks Act* and National Parks Policy by Parks Canada. Wood Buffalo National Park is a World Heritage Site.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Studies in the early 1970s identified that water levels on the delta required regulating to mitigate the effects of the Bennett Dam, and weirs were subsequently constructed at Rivière des Rochers and Revillon Coupé. There is careful monitoring and management of the hunting and trapping activities of the native Indian population. Bison are specifically protected from native domestic hunting under park game regulations. A portion of the park area until recently had logging rights but these were rescinded by Environment Canada in 1992.

(b) Surrounding Area: Provincial Crown land.

Threats to Integrity of:

(a) Site: Some form of intensive manipulation of the bison herd may be required in the future due to the presence of anthrax, brucellosis and bovine tuberculosis on the bison range. Outbreak control measures for anthrax have been carried out and will be continued. An Environmental Assessment Panel in 1991 recommended the full herd be destroyed but this has not been implemented.

(b) Surrounding Area: At present, the only major threat to the delta is the Bennett Dam. It is located upstream on the Peace River in British Columbia and was constructed in 1967. The dam caused a significant drop in water flow to the delta resulting in insufficient water levels to fill the numerous perched basins in the area. Any further dam construction or river diversion on the Peace River could result in more damage to the delta. The effects of the reduced water flows as a result of this dam construction have been almost fully mitigated by the development of weirs on the Peace River tributaries.

These have nearly restored the natural summer peak water levels in the delta but the amplitude of seasonal and annual fluctuations is still less than under the natural water flow regime.

Status of Management Plan: A draft *Wood Buffalo National Park Ecosystem Conservation Plan* was produced by Parks Canada in August 1993. It is currently undergoing review and consultation. The *Peace-Athabasca Delta Ecosystem Management Plan* implemented in January 1993 is in the second year of a cooperative three-year study between Parks Canada, the province of Alberta and local native organizations. The *Wood Buffalo National Park Draft Management Plan* also was released for review by Parks Canada in November 1993.

Management Authority:

Superintendent
Wood Buffalo National Park
Box 750
Fort Smith, Northwest Territories
X0E 0P0

WHOOPING CRANE SUMMER RANGE, ALBERTA/NORTHWEST TERRITORIES

Jurisdiction: Federal - Department of Canadian Heritage and Indian and Northern Affairs Canada

Land Tenure:

(a) Site: Most of this Ramsar site lies within Wood Buffalo National Park which is owned by the Government of Canada. About 14% of the Whooping Crane summer range area lying outside of the park is on federal Crown land in the Northwest Territories.

(b) Surrounding Area: Federal Crown land.

Conservation Measures Taken: Most of the Whooping Crane summer range lies within Wood Buffalo National Park and in an area of Zone 1 Special Preservation, protected under the *National Parks Act* and administered by Parks Canada. Wood Buffalo Park is a World Heritage site. The range includes the International Biological Program (IBP) sites 12 and 13, and Whooping Crane nesting area.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Most of the area is under the management of Parks Canada which is currently evaluating and planning future management requirements. All fires in the area are extinguished, with the Whooping Crane nesting area one of the main priorities. Hunting and trapping of fur bearers by native inhabitants is permitted. Ground access and aerial traffic under 600 m is prohibited in the Whooping Crane nesting area. Excess Whooping Crane eggs are removed by the Canadian Wildlife Service of Environment Canada for a foster parent program in Idaho conducted as part of a Whooping Crane Recovery Plan. Environment Canada carries out aerial Whooping Crane breeding pair and production surveys annually.

(b) Surrounding Area: Limited forestry operations exist outside the National Park area.

Threats to Integrity of:

(a) Site: An extra-heavy voltage powerline running parallel to Highway 5 is a constant danger to low flying birds and electrical power transmission lines from the dam site to the Fort McMurray, Alberta area pose a serious hazard to migratory birds including Whooping Crane. It is likely that traffic along Highway 5 north and west of Fort Smith, Northwest Territories will increase, particularly if there is large-scale industrial development near Fort Smith. Highway 5 is the only road access from the west to the

Whooping Crane summer range. It bisects the Whooping Crane nesting area and runs within five km of a known nesting site. During dry summers, food availability and increasing vulnerability to terrestrial predators is a threat to the Whooping Crane population.

(b) Surrounding Area: A feasibility study to examine positive and negative effects of a proposed hydro-electric dam across the Slave River near Fort Smith has been conducted. It is possible that a dam on the Slave River could change or disrupt water levels and/or drainage patterns in the Whooping Crane summer range. The regional moisture deficit together with up to 40 thunderstorms per season creates an extreme forest-fire weather zone in the area. Seasonal drought in some years also greatly affects water levels in the nesting ponds.

Status of Management Plan: A draft long-range *Wood Buffalo National Park Ecosystem Conservation Plan* was produced by Parks Canada in August 1993. It is currently undergoing review and consultation. The *Wood Buffalo National Park Draft Management Plan* also was released for review by Parks Canada in November 1993.

Management Authority:

Superintendent
Wood Buffalo National Park
Box 750
Fort Smith, Northwest Territories
X0E 0P0

LAST MOUNTAIN LAKE, SASKATCHEWAN

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: The area is owned by the Government of Canada.

(b) Surrounding Area: Private land and provincial Crown land.

Conservation Measures Taken: The area was first set aside in 1887 and has been administered cooperatively as a migratory bird sanctuary since 1968. The area is protected under the Migratory Bird Sanctuary Regulations which stem from the *Migratory Birds Convention Act* and the National Wildlife Area Regulations under the *Canada Wildlife Act*. Last Mountain Lake was recognized as a key site under the International Biological Program in the 1970s; a Ramsar site in 1982; a National Historic Site in 1990; and a Western Hemisphere Shorebird Reserve in 1994.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: The area is managed for the conservation of migratory birds, their habitats, and for other wildlife species, and to help reduce crop damage of cereal grain by influencing the local distribution of waterfowl. The site serves as a refuge for waterbirds in drought years. Boating and recreational fishing are permitted with public access restricted in August and September to minimize disturbance of birds feeding on lure crops.

(b) Surrounding Area: Economic activities such as hay cutting and grazing are normally restricted to lands outside the sanctuary.

Threats to Integrity of:

(a) Site: A steady rise in public use in the surrounding area and on Last Mountain Lake is causing increasing disturbance to wildlife, particularly colonial nesting birds, throughout the year. Breeding success of Double-crested Cormorant *Phalacrocorax auritus*, and perhaps other birds, has declined, and American White Pelican *Pelecanus erythorhynchos* now breeds here regularly. Natural fluctuations of the lake level have been controlled, thereby reducing the return of nutrients to some marshlands.

Several species of exotic plants (smooth bromegrass, toadflax, and nodding thistle) have increased their occurrence in this area in recent years. Carp, first detected in 1968, have also increased, perhaps at the expense of native fish species such as the vulnerable

bigmouth buffalo fish. Management actions to control the spread of these exotic species are underway.

(b) Surrounding Area: Increasing amounts of fertilizers and toxic chemicals from surrounding agricultural land are carried into the area by runoff water.

Status of Management Plan: A *Draft Resource Management Plan for the Last Mountain Lake National Wildlife Area and Migratory Bird Sanctuary* was released for review and consultation by Environment Canada in January 1994.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Prairie and Northern Region
Environment Canada
4999 - 98th Avenue
Edmonton, Alberta
T6B 2X3

QUILL LAKES, SASKATCHEWAN

Jurisdiction: Provincial - Saskatchewan Department of Natural Resources.

Land Tenure:

(a) Site: The lake complex is principally provincial Crown land administered by the Government of Saskatchewan.

(b) Surrounding Area: Mainly privately-held land.

Conservation Measures Taken: 18 000 ha have been designated under the *Saskatchewan Critical Wildlife Habitat Protection Act*. Islands located in Middle Quill Lake are designated as provincial wildlife refuges to protect breeding colonies of American White Pelican *Pelecanus erythorhynchos* and Double-crested Cormorant *Phalacrocorax auritus*. The wetland complex is also included in the Saskatchewan Heritage Marsh Program. Quill Lakes was identified as a site under the International Biological Program in the 1970s. The site was declared a Western Hemispheric Shorebird Reserve in May 1994 under the Western Hemispheric Shorebird Reserve Network.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: In 1987, Quill Lakes was used as the first implementation site for the North American Waterfowl Management Plan (NAWMP) in Canada. In NAWMP First Step initiatives alone, 6 630 ha were protected and or enhanced here for waterfowl and other wildlife values. Designation as a premier provincial marsh under the Heritage Marsh Program involves intensified management of existing Ducks Unlimited Canada projects on tributary drainages, and the allocation of more resources to the waterfowl crop damage prevention program.

Agricultural activities (cultivation, livestock grazing and haying) have been common for most of the past century throughout upland areas associated with the Quill Lakes complex, and grazing and haying also occur on the salt flats of Big Quill Lake. The Waterfowl Crop Damage Control Program was instituted in the late 1960s to compensate landowners for grain crops lost to field feeding waterfowl. This active program now employs temporary lure crops (168 ha) and four bait stations to reduce the incidence of crop depredation in the area. Field studies indicated a need to upgrade the local crop damage control program; this is being done under the North American Waterfowl Management Plan activities in this region.

(b) Surrounding Area: Mainly private agricultural land.

Threats to Integrity of:

(a) Site: A potassium sulphate extraction plant has been proposed for Big Quill Lake. Concern over resultant water chemistry changes to the lake and potential associated impacts on aquatic invertebrates and migratory birds has resulted in an environmental impact assessment by the province of Saskatchewan. This assessment concluded that the proposed development would not have a significant impact on the ecology of the lake. Based upon the assessment, the proposed development has been approved. The Potash Corporation of Saskatchewan has been directed to monitor Piping Plover and other shorebird populations in advance of any decision to proceed.

Drought has led to a serious drawdown in lake levels, resulting in increasing salinity levels and reduction in shoreline habitat for such species as Piping Plover.

(b) Surrounding Area: None currently.

Status of Management Plan: Numerous sites around the lakes are managed as waterfowl projects under the North American Waterfowl Management Plan. A *Cooperative Shorebird Management Plan* will be completed by July 1995.

Management Authority: The area is managed in cooperation with the Saskatchewan Wetland Conservation Corporation. The responsible management authority is:

Wildlife Branch
Saskatchewan Department of Natural Resources
3211 Albert Street
Regina, Saskatchewan
S4S 5W6

DELTA MARSH, MANITOBA

Jurisdiction: Mainly provincial - Manitoba Department of Natural Resources.

Land Tenure:

(a) Site: A combination of provincial Crown land and private land.

(b) Surrounding Area: Private land.

Conservation Measures Taken: About 16 600 ha are in public ownership as provincial Crown lands administered by the Wildlife Branch of the Manitoba Department of Natural Resources. 2 000 ha of this area are protected as a game bird refuge and 7 700 ha as public shooting grounds. The Delta Waterfowl Research Station controls a further 1 600 ha of the marsh. The remaining land is under private ownership. The provincial Crown land of this site is designated as Heritage Marsh.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Parts of the area are cut annually for hay and the marsh provides valuable fur and fish harvests. Hay and waterfowl harvests are regulated and the use of motorized boats is restricted.

(b) Surrounding Area: Private and provincial Crown land.

Threats to Integrity of:

(a) Site: The privately-owned west portion of the marsh is periodically flooded by the Portage Floodway, causing excessive siltation and vegetational growth.

(b) Surrounding Area: There is pressure to develop additional cottage sites and recreational facilities on nearby Lake Manitoba beaches.

Status of Management Plan: Management plans have been proposed by the province and by Ducks Unlimited Canada in the 1978 *Delta Marsh Plan*. These include water level control and development of a public-private cooperative marsh management district. A *Development Plan* covers Lake Francis.

Management Authority:

Wildlife Branch
Manitoba Department of Natural Resources
1495 St. James Street
Winnipeg, Manitoba
R3H 0W9

OAK HAMMOCK MARSH, MANITOBA

Jurisdiction: Provincial - Manitoba Department of Natural Resources.

Land Tenure:

(a) Site: The site is owned by the Government of Manitoba.

(b) Surrounding Area: Private land.

Conservation Measures Taken: The site is protected under provincial legislation as a wildlife management area.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: The wetland is divided into four impoundments with water control capabilities built into each major cell. Individual impoundments can be drawn down or reflooded to required levels in order to effect management objectives. The primary management objectives are to increase populations of waterfowl and other wetland wildlife through the provision of quality breeding habitat and to provide an outdoor educational experience for Manitoba residents. Uplands are managed as lure crops to control waterfowl depredation and as upland nesting cover for dabbling ducks and other ground nesting birds. Tallgrass Prairie remnants are maintained in this wildlife management area also.

(b) Surrounding Area: Agricultural uses and grazing dominate surrounding properties.

Threats to Integrity of:

(a) Site: Urban encroachment, industrial development and over-use of the artesian water source are all potential threats to the viability of the wetlands.

(b) Surrounding Area: As above.

Status of Management Plan: A specific management plan has not been developed. The Wildlife Management Area has an on-site marsh manager. Site management is undertaken in cooperation with Ducks Unlimited Canada and the Oak Hammock Marsh Conservation Centre. The document *Interpretive Plan for Oak Hammock Marsh Interpretive Centre and Wildlife Management Area* was released in August 1991 to guide public education initiatives for this Ramsar site.

Management Authority:

Wildlife Branch
Manitoba Department of Natural Resources
1495 St. James Street
Winnipeg, Manitoba
R3H 0W9

DEWEY SOPER MIGRATORY BIRD SANCTUARY, NORTHWEST TERRITORIES

Jurisdiction: Federal - Environment Canada; Native - as per the *Nunavut Land Claim Agreement*.

Land Tenure:

(a) Site: Up to 1993, this area was federal Crown land. Ownership, land use and hunting rights are now governed by the outcome of land claim negotiations between the Inuit and the Government of Canada. The southwest corner of this area is held in fee simple by the Inuit of Nunavut.

(b) Surrounding Area: Federal Crown land and native lands as per the *Nunavut Land Claim Agreement*.

Conservation Measures Taken: The sanctuary was established in 1957. It is protected under the Migratory Bird Sanctuary Regulations which stem from the *Migratory Birds Convention Act* of 1917. Under Article 9 of the *Nunavut Land Claim Agreement*, the sanctuary remains subject to the regulations of the *Act*.

Conservation Measures Proposed: This area is subject to co-management agreements under the *Nunavut Land Claim Agreement*. The boundary of the sanctuary is under review and may increase.

Current Land Use/Activities in:

(a) Site: Hunting, trapping and fishing by local Inuit continue on this land. Land use permits are issued by the Canadian Wildlife Service under the Migratory Bird Sanctuary Regulations and by Indian and Northern Affairs Canada under the Territorial Land Use Regulations for the area. Sporadic Snow Goose surveys are conducted. Screening of projects under the Nunavut Impact Review Board is undertaken with certificates issued by the Nunavut Planning Commission. Permission is required to gain access to Inuit-owned land.

(b) Surrounding Area: Territorial land use regulations apply to federal Crown land.

Threats to Integrity of:

(a) Site: There are no imminent threats.

(b) Surrounding Area: There are no imminent threats.

Status of Management Plan: As part of the *Nunavut Land Claim Agreement*, a management plan for this area is required within five years of the declaration of the new Nunavut Territory in 1999.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Prairie and Northern Region
Environment Canada
4999 - 98th Avenue
Edmonton, Alberta
T6B 2X3

MCCONNELL RIVER MIGRATORY BIRD SANCTUARY, NORTHWEST TERRITORIES

Jurisdiction: Private - Nunavut Inuit.

Land Tenure:

(a) Site: Fee simple title to this sanctuary is held by the Inuit of Nunavut.

(b) Surrounding Area: Federal Crown land.

Conservation Measures Taken: The sanctuary was established in 1960 and is protected under the Migratory Bird Sanctuary Regulations that stem from the *Migratory Birds Convention Act* of 1917. Under Article 9 of the *Nunavut Land Claim Agreement*, the sanctuary remains subject to the regulations of the *Act*.

Conservation Measures Proposed: The area is subject to comanagement agreements under the *Nunavut Land Claim Agreement*. The boundaries of the sanctuary are under review and may increase.

Current Land Use/Activities in:

(a) Site: Hunting, trapping and fishing by the local Inuit of the community of Arviat continue on this land. Land use permits are issued by the Canadian Wildlife Service under the Migratory Bird Sanctuary Regulations and by Indian and Northern Affairs Canada under the Territorial Land Use Regulations for the area. Sporadic Snow Goose surveys are conducted and grazing and habitat studies are underway. Screening of projects under the Nunavut Impact Review Board is undertaken with certificates issued by the Nunavut Planning Commission. Permission is required to gain access to Inuit-owned land.

(b) Surrounding Area: Territorial Land Use Regulations are in effect on federal Crown land. Hunting, trapping and fishing by Inuit of the community of Arviat continue on this land.

Threats to Integrity of:

(a) Site: Habitat degradation is occurring due to an increase in the Snow Goose population.

(b) Surrounding Area: There are no immediate threats to this area.

Status of Management Plan: As part of the *Nunavut Land Claim Agreement*, a management plan for this area is required within five years of the declaration of the new Nunavut Territory in 1999.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Prairie and Northern Region
Environment Canada
4999 - 98th Avenue
Edmonton, Alberta, T6B 2X3

POLAR BEAR PASS NATIONAL WILDLIFE AREA, NORTHWEST TERRITORIES

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: The area is federal Crown land.

(b) Surrounding Area: Federal Crown land.

Conservation Measures Taken: Designated as a National Wildlife Area in 1990 and protected under regulations of the *Canada Wildlife Act*.

Conservation Measures Proposed: The boundaries of the area are under review.

Current Land Use/Activities in:

(a) Site: Mining, oil exploration and drilling permits were issued many years ago. Surface and subsurface rights to exploration and development were withdrawn prior to the area being created a national wildlife area. The area is subject to co-management agreements under the *Nunavut Land Claim Agreement*. Land use permits are issued by the Canadian Wildlife Service under the National Wildlife Area Regulations of the *Canada Wildlife Act*. Studies of Peary caribou in this area are being conducted by the Canadian Wildlife Service. A long-term ecological research station on this site was recently shut down.

(b) Surrounding Area: Territorial Land Use Regulations are in effect on federal Crown land. Screening of projects under the Nunavut Impact Review Board is undertaken with certificates issued by the Nunavut Planning Commission. Permission is required to gain access to Inuit-owned lands.

Threats to Integrity of:

(a) Site: None at present.

(b) Surrounding Area: None at present.

Status of Management Plan: The *Polar Bear Pass National Wildlife Area Management Plan* was developed in draft form in April 1989 and was released by Environment Canada and the Polar Bear Pass Advisory Committee in February 1990.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Prairie and Northern Region
Environment Canada
4999 - 98th Avenue
Edmonton, Alberta, T6B 2X3

QUEEN MAUD GULF MIGRATORY BIRD SANCTUARY, NORTHWEST TERRITORIES

Jurisdiction: Federal - Environment Canada; Private - Nunavut Inuit.

Land Tenure:

(a) Site: Most of the sanctuary is federal Crown Land. Title to small portions is held in fee simple by the Inuit of Nunavut under the *Nunavut Land Claim Agreement*. These include sites near the Inglis and Murchison rivers.

(b) Surrounding Area: A mix of federal Crown land and Inuit-owned land.

Conservation Measures Taken: Established as a sanctuary in 1961 and protected under the Migratory Bird Sanctuary Regulations which stem from the *Migratory Birds Convention Act* of 1917. Under Article 9 of the *Nunavut Land Claim Agreement*, the sanctuary remains subject to the regulations of the *Act*.

Conservation Measures Proposed: The boundaries of the sanctuary are under review and may change.

Current Land Use/Activities in:

(a) Site: The area is subject to co-management agreements under the *Nunavut Land Claim Agreement*. Hunting, trapping and fishing by the local Inuit of the communities of Cambridge Bay, Umingmaktok and Bathurst Inlet continue on this land. A habitat survey of the sanctuary was recently completed. There are regular surveys of Snow Goose and Ross' Goose populations. Land use permits are issued by the Canadian Wildlife Service under the Migratory Bird Sanctuary Regulations and by Indian and Northern Affairs Canada under the Territorial Land Use Regulations for the area. Screening of projects under the Nunavut Impact Review Board is undertaken with certificates issued by the Nunavut Planning Commission. Permission is required to gain access to Inuit-owned land.

(b) Surrounding Area: Territorial Land Use Regulations apply to federal Crown land. Hunting, fishing and trapping by local Inuit continue.

Threats to Integrity of:

(a) Site: The sanctuary borders a proposed shipping route for a lead/zinc mine in Coronation Gulf. Development of the mine and a port site are currently not proceeding due to the depressed world market for base metals.

(b) Surrounding Area: None at present.

Status of Management Plan: As part of the *Nunavut Land Claim Agreement*, a management plan for this area is required within five years of the declaration of the new Nunavut Territory in 1999.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Prairie and Northern Region
Environment Canada
4999 - 98th Avenue
Edmonton, Alberta
T6B 2X3

RASMUSSEN LOWLANDS, NORTHWEST TERRITORIES

Jurisdiction: Federal - Indian and Northern Affairs Canada.

Land Tenure:

(a) Site: Most of the area is federal Crown land. Title to sites near the Inglis and Murchison rivers are held in fee simple by the Inuit of Nunavut as per the *Nunavut Land Claim Agreement*.

(b) Surrounding Area: A mix of federal Crown land and Inuit-owned land.

Conservation Measures Taken: None to date.

Conservation Measures Proposed: This area may be proposed to be designated as a National Wildlife Area. It would be subject to co-management agreements under the *Nunavut Land Claim Agreement*.

Current Land Use/Activities in:

(a) Site: Hunting, fishing and trapping continue by local Inuit of Taloyoak and Gjoa Haven. The area is used as a winter travel route between local communities. Permits are issued by Indian and Northern Affairs Canada under the Territorial Land Use Regulations for this area. Screening of projects under the Nunavut Impact Review Board is undertaken with certificates issued by the Nunavut Planning Commission. Permission is required to gain access to Inuit-owned land. Habitat and ornithological studies are underway for this area.

(b) Surrounding Area: Hunting, fishing and trapping continue by local Inuit of Taloyoak and Gjoa Haven.

Threats to Integrity of:

(a) Site: A plan developed in the 1970s for the proposed Polar Gas pipeline called for the pipeline corridor to cross this area. This project has not proven viable to date.

(b) Surrounding Area: None currently.

Status of Management Plan: There currently is no active management of this area. Should the area be designated as a National Wildlife Area, under the *Nunavut Land Claim Agreement* a management plan for this area would be required within five years of its designation after the declaration of the Nunavut Territory in 1999.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Prairie and Northern Region
Environment Canada
4999 - 98th Avenue
Edmonton, Alberta
T6B 2X3

ONTARIO REGION

LONG POINT, ONTARIO

Jurisdiction: Partially federal - Environment Canada. Partially provincial - Ontario Ministry of Natural Resources. Partially private.

Land Tenure:

(a) Site: Ownership is divided among a number of organizations and governments. Federal government - Ontario Region: Canadian Wildlife Service, Environment Canada (2 440 ha). Provincial government - Ontario Ministry of Natural Resources (820 ha) and Long Point Region Conservation Authority (220 ha). Also navigable water of the inner bay (7 280 ha), private waterfowl hunt clubs including the Long Point Company (3 210 ha), and other private ownership (40 ha).

(b) Surrounding Area: The Ramsar site is bordered by Lake Erie to the south and private lands in the Municipality of Haldimand-Norfolk to the north of the Inner Bay.

Conservation Measures Taken: Lands administered by the Canadian Wildlife Service, Environment Canada have been designated as National Wildlife Areas under the *Canada Wildlife Act* since 1973 (the Big Creek National Wildlife Area since 1973 and the Long Point National Wildlife Area since 1978). Lands administered by the Ontario Ministry of Natural Resources are designated either as provincial park or controlled through the *Public Lands Act*. The Long Point Region Conservation Authority owns and administers its property under the *Conservation Authorities Act*. The extensive wetlands of the Long Point Company have been protected and managed since 1886. The wetlands of Long Point are zoned as Environmental Protection Areas under the official plan for the Regional Municipality of Haldimand-Norfolk but this does not ensure protection.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: The two National Wildlife Areas administered by the Canadian Wildlife Service, Environment Canada are managed to protect their value for wildlife. The Long Point National Wildlife Area is managed as a wilderness area with little interference in the dynamic forces of nature and limited public use. Some restorative measures may be undertaken to rectify adverse impacts caused by past human activities. The Big Creek National Wildlife Area is managed primarily as a waterfowl migration staging area. The Big Creek Marsh has been historically managed for waterfowl hunting and muskrat harvesting. Management activities include water level manipulation in two impoundments and the creation/maintenance of interior channels in the remainder of the marsh to facilitate waterfowl. Muskrat and other furbearers are trapped under National

Wildlife Area permits and waterfowl hunting is permitted in a portion of the National Wildlife Area. At certain times of the year, sport fishing, canoeing, wildlife viewing and use of a dike-top trail with an observation tower are also permitted.

The Inner Bay at Long Point is one of the province's most popular sport fishing areas for smallmouth bass and other game species. The provincial Crown marsh is utilized for fishing, boating and wildlife viewing. It is managed by the Ontario Ministry of Natural Resources in the Fall as a waterfowl hunting unit. The marsh areas owned by the Long Point Region Conservation Authority and private owners are managed for waterfowl hunting purposes.

(b) Surrounding Area: The Town of Port Rowan and the communities of St. Williams, Booth's Harbour and Long Point Beach are located around the Inner Bay. The mainland area of the Regional Municipality of Haldimand-Norfolk is a mixture of privately-owned agricultural and forested lands.

Threats to Integrity of:

(a) Site: Direct threats to the unprotected wetlands are primarily proposals to convert the marshes to agriculture or recreation. Marina developments and trailer parks that service the large boating public have increased and the construction of channels to service private cottages requires rigid control.

Long Point commonly receives precipitation that has a pH of about 4.0 during some periods of the year. Environmental pollution from the industrial area on the shore of Lake Erie to the east and from Great Lakes shipping is a constant concern. Other threats include possible off-site developments which could interfere with the littoral drift and transport of sand that forms Long Point or by artificial manipulation of the water level of the Great Lakes. Severe storms can overwash the barrier beach damaging the wetland, and high water levels accelerate erosion.

The lands owned by the private waterfowl clubs are managed for waterfowl hunting and are not at present considered in danger of loss. Escalating land costs, however, could materially affect their status. The Canadian Wildlife Service and Nature Conservancy of Canada have the right of first refusal to those lands still owned by the Long Point Company.

(b) Surrounding Area: Outside the area, there are continuing pressures for recreational developments, notably marinas and housing.

Status of Management Plan: The *Long Point National Wildlife Area: Management Plan* was released in March 1983. A management plan for the Big Creek complex was also completed in 1984.

Management Authority: Multiple - including Canadian Wildlife Service, Environmental Conservation Branch, Ontario Region, Environment Canada; Ontario Ministry of Natural Resources; Long Point Region Conservation Authority; and Long Point Company.

POINT PELEE NATIONAL PARK, ONTARIO

Jurisdiction: Federal - Department of Canadian Heritage.

Land Tenure:

(a) Site: The national park is federal Crown land.

(b) Surrounding Area: Mainly private land holdings.

Conservation Measures Taken: Point Pelee is administered as a National Park (declared in 1918) under the *National Parks Act*.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: The national park is zoned and follows the five zone national park zoning system, each zone differing with the intensity and type of visitor use, as well as the degree of natural resource protection desired. Zone 1 is the special preservation zone and is designed to preserve essentially unimproved and nationally unique, rare and endangered areas or features. This zone has the highest degree of resource protection and in the park includes the eastern barrier ridge and several marsh areas important for rare plants and nesting birds. The purpose of Zone 2 (wilderness) is to protect areas that represent natural history themes, while allowing primitive low-intensity recreational activities. This zone includes the majority of the marsh area within the park. Zone 3 (natural environment) is designed to maintain a natural environment setting, while allowing recreational opportunities that require a minimum of man-made facilities. East Beach, much of the sand plain area, and beaches with few or no support facilities, fall within this zone at Point Pelee. Areas that can withstand a full range of visitor uses and support-related facilities may be located in the outdoor recreation area, or Zone 4. Zone 5 is the park services zone where concentrations of visitor services and support facilities are required to manage and operate the park.

In addition to the five basic management zones, there are other small areas containing significant natural or cultural features that are particularly sensitive to development and use. These environmentally-sensitive sites do not have the characteristics necessary to designate them as Zone 1 areas and need to be specially protected. The degree of protection required is determined by an assessment of the importance and sensitivity of the resource. There are three specific activities that attract the most use at Point Pelee;

bird watching, smelt fishing and beach-related activities. Duck hunting within the park was considered an anomaly and was proposed to be eliminated in 1992.

(b) Surrounding Area: Lands to the north of the park are mainly used for agriculture or are urban and rural settlements.

Threats to Integrity of:

(a) Site: The threats to the park result from effects of human land use in southern Ontario and on Lake Erie. The park is close to major industrial centres in the United States such as Detroit, Toledo and Cleveland, and prevailing westerly winds constantly expose it to airborne pollution. Lake Erie, while improved in its water quality, is still subject to industrial, urban and agricultural pollution. This deteriorated water quality directly affects the ecology of the marsh of Point Pelee National Park.

High Lake Erie water levels and the subsequent erosion and breaching of the eastern barrier ridge, have substantially altered the water quality, due to increased turbidity and direct mixing of Lake Erie with marsh water. The high water levels have increased wave action in the open ponds. This has initiated break-up of the cattail mat and movement of floating sections. Structural shoreline protection, particularly north and east of the park, has interrupted the dynamics of the coastal sand budget. Point Pelee no longer receives sufficient sediment on its eastern barrier ridge to ensure its re-establishment after water levels in Lake Erie drop. In future this may lead to a marsh that is more open to Lake Erie.

Faunal and floral composition has been altered with the introduction of Lake Erie species into the marsh and due to adjacent agricultural land use. Control of exotic species is ongoing in the park. Agriculture immediately north of the park poses a threat of additional eutrophication of the marsh due to fertilizer run-off. Chemical pesticide and herbicide residues may also enter the marsh ecosystem. The effects of chemicals have yet to be determined. The location along the major Great Lakes shipping channel poses the threat of oil and toxic chemical spills. Previous oil spills have washed up on the park shoreline and have adversely affected the beach flora and fauna. However, park contingency plans address these situations.

(b) Surrounding Area: As above.

Status of Management Plan: The park is comprehensively covered by national park management planning and land use zoning provisions of the *National Parks Act*. Natural resources protection and appropriate visitor-related use and facilities are outlined by the 1982 *Point Pelee National Park Management Plan* which is reviewed every five years.

Management Authority:

Superintendent
Point Pelee National Park
R.R. #1
Leamington, Ontario
N8H 3V4

POLAR BEAR PROVINCIAL PARK, ONTARIO

Jurisdiction: Provincial - Ontario Ministry of Natural Resources.

Land Tenure:

(a) Site: The area is a provincial park which is provincial Crown land.

(b) Surrounding Area: Provincial Crown land and Indian Reserve; Hudson Bay to the north and James Bay to the east.

Conservation Measures Taken: Polar Bear Provincial Park was established as a wilderness park under the Ontario Provincial Parks classification by Order-in-Council on 30 April 1970. The area is protected from development and from exploitation of natural resources. A majority of the area has been designated as wilderness zones, nature reserves, or historical zones, providing protection against disturbance of wildlife or deterioration of the environment.

Conservation Measures Proposed: The province of Ontario is currently considering extensions of the park's boundaries in consultation with local native residents.

Current Land Use/Activities in:

(a) Site: There are five access zones where aircraft may land and where camping is encouraged. Non-native use of access zones, trails and campsites is monitored for deterioration. The indigenous Cree Indians, as residents of the coastal communities, will continue to be permitted to hunt, fish and trap for subsistence and gather wild commodities for non-commercial purposes. There are two native-owned and operated hunting and fishing camps, one at Shagamu River and the other at the Sutton River access zone. Registered guests of these camps are the only non-native hunters of waterfowl, grouse and snipe permitted in the park.

(b) Surrounding Area: Traditional native fishing, hunting and trapping as well as commercial outfitting camps for hunting and fishing.

Threats to Integrity of:

(a) Site: None at present.

(b) Surrounding Area: Hydro development in the future could become an issue affecting this region.

Status of Management Plan: The park is covered comprehensively by provincial park management provisions and land use zonation under the *Ontario Provincial Parks Act*. The *Polar Bear Provincial Park Planning Proposal* was released in 1977. A management plan is in preparation.

Management Authority:

District Manager
Cochrane District
Ontario Ministry of Natural Resources
2 Third Street
Cochrane, Ontario
P0L 1C0

ST. CLAIR NATIONAL WILDLIFE AREA, ONTARIO

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: The area is federal Crown land.

(b) Surrounding Area: Mainly private land holdings and provincial Crown land (Lake St. Clair).

Conservation Measures Taken: Designated as a National Wildlife Area and protected under regulations of the *Canada Wildlife Act* of 1973.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: In 1940 the land was purchased by a hunting club and the area was diked, strips were ploughed to encourage the establishment of marsh plants, and then it was flooded. Water levels were kept low in summer to encourage aquatic plant growth and some species were introduced. Water levels were raised in fall to attract ducks and were kept high during muskrat trapping seasons. Since its acquisition by Environment Canada in 1974, a variety of wildlife management techniques have been employed. Constructed nesting islands and existing dikes, spoil piles, and meadow areas provide nest sites. Cut channels provide brood habitat and loafing or resting areas. Water circulation throughout the marsh has been improved by pumping; water level manipulations and cattail control measures have improved interspersion of open water and emergent vegetation. These measures have improved growth of submergent aquatic plants and the associated invertebrates that provide food for waterfowl species.

Muskrat harvesting, which minimizes damage to dikes from muskrat tunnels, continues to be allowed under National Wildlife Area permits. Trapping also encourages maintenance of healthy populations of muskrats which, by using cattails as a major food source and for lodge-building materials, limit the encroachment of cattail in the marsh ponds and channels. The St. Clair National Wildlife Area also provides a year-round dike-top trail and viewing tower for public use.

(b) Surrounding Area: The adjacent marshes are managed by waterfowl hunting clubs with water-level management similar to the National Wildlife Area. The adjacent upland is among the most productive farmland in Canada and is extensively cash-cropped, primarily for corn and soybeans.

Threats to Integrity of:

(a) Site: Of the marshes remaining along Lake St. Clair's east shore, only St. Clair National Wildlife Area is protected from development. There has been major wetland loss of privately-owned wetlands due to drainage for agriculture, development for recreational uses and cottage development. The lakeshore marshes are vulnerable to impacts from off-site development. Spills of oil or other toxic chemicals from Great Lakes shipping are a constant threat. Manipulations of lake levels or impacts of an extended navigation season on the Great Lakes could cause wetland losses and detrimental changes. St. Clair National Wildlife Area is diked and somewhat protected from, but not invulnerable to, such impacts. Purple loosestrife is now present in this area and expanding.

(b) Surrounding Area: Marsh areas are under constant threat to drainage for agriculture and marina development. Purple loosestrife continues to expand into the marshes of Lake St. Clair.

Status of Management Plan: The *St. Clair National Wildlife Area Management Plan* was released in August 1982. It will be updated to reflect current goals for the area.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Ontario Region
Environment Canada
152 Newbold Crescent
London, Ontario
N6E 1Z7

SOUTHERN JAMES BAY MIGRATORY BIRD SANCTUARIES, ONTARIO/NORTHWEST TERRITORIES

Jurisdiction: Provincial - Ontario Ministry of Natural Resources.

Land Tenure:

(a) Site: The two sanctuaries (Moose River and Hannah Bay) mainly are provincial Crown land except for offshore islands lying within the Northwest Territories which are federal Crown land.

(b) Surrounding Area: Provincial Crown land and Indian Reserve lands and offshore waters in the Northwest Territories.

Conservation Measures Taken: Both sanctuaries are protected under the *Migratory Birds Convention Act*.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: The sanctuaries have been designated to keep important staging habitats free from hunting pressure and permit an increase in native harvest in the surrounding tidal marshes. Management implications are to clearly post the sanctuaries' boundaries and to enforce the no-hunting regulations. Management and enforcement activities generally take place as a cooperative effort by federal and provincial agencies.

(b) Surrounding Area: Traditional native hunting, fishing and trapping as well as commercial outfitting camps primarily for goose hunting.

Threats to Integrity of:

(a) Site: None at present.

(b) Surrounding Area: Hydro development in the future could become an issue affecting this region.

Status of Management Plan: A management plan for these migratory bird sanctuaries has not been prepared to date.

Management Authority: Jointly administered by Ontario Ministry of Natural Resources and Canadian Wildlife Service, Environmental Conservation Branch, Ontario Region, Environment Canada.

District Manager
Cochrane District
Ontario Ministry of Natural Resources
2 Third Street
Cochrane, Ontario
P0L 1C0

QUEBEC REGION

BAIE DE L'ÎSLE-VERTE NATIONAL WILDLIFE AREA, QUEBEC

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: Most of the site is provincial Crown Land. Some 528 ha is owned by the Canadian Wildlife Service and an additional 1 500 ha is owned by the Government of Quebec. However, the Canadian Wildlife Service has acquired most of the hunting, fishing and hay harvesting rights in this sector.

(b) Surrounding Area: Mainly private lands.

Conservation Measures Taken: The land administered by the Canadian Wildlife Service, Quebec Region, Environment Canada was designated a national wildlife area on 5 June 1980 under the National Wildlife Area Regulations and the *Canada Wildlife Act* of 1973. In 1986, the migratory bird sanctuary was established on the banks of Rivière Verte.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: The area is managed for the protection of fauna and their habitats. Only activities compatible with these objectives are permitted. All other uses that would have a negative effect are rigorously controlled. Public access is limited to certain sectors, although hiking and wildlife observation is permitted.

(b) Surrounding Area: Mainly agricultural land uses.

Threats to Integrity of:

(a) Site: Agricultural activities on surrounding lands could affect the integrity of the marshes. Fertilizers, herbicides and pesticides carried by streams from agricultural land through the drainage network could affect the quality of water courses in the area. This is also the case for wastewater from surrounding areas which is emptied into the river untreated or after partial treatment. Accidental spills of oil during transport by tanker and similar spills in the nearby Port of Cacouna pose a potentially serious threat to riverine ecosystems.

(b) Surrounding Area: None currently.

Status of Management Plan: The *Plan de gestion de la Réserve nationale de faune de la baie de L'Isle-Verte* was released in May 1986.

Management Authority:

Canadian Wildlife Service
Quebec Region
Environment Canada
C.P. 10 100
Ste-Foy, Quebec
G1V 4H5

CAP TOURMENTE NATIONAL WILDLIFE AREA, QUEBEC

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: The 2 398 ha area of Cap Tourmente is owned by the Government of Canada.

(b) Surrounding Area: Mainly private land holdings.

Conservation Measures Taken: Designated as a National Wildlife Area on 27 April 1973. Established and subject to the National Wildlife Area Regulations under the *Canada Wildlife Act* of 1973.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Attempts to alleviate overgrazing of the marsh by Greater Snow Geese are aimed mainly at encouraging use of nearby tidal marshes by larger numbers of geese. Plans are presently being made to manage portions of the coastal meadow to provide supplementary feeding sites within the national wildlife area. Maintenance of the existing managed areas - the ponds and ditches - will be required to maintain the attraction of these areas to breeding ducks. Some hunting is allowed based on certain traditional methods such as the use of pit-blinds and horse-drawn mud sleds.

Management of drainage ditches, the construction of artificial ponds and protection of beaver *Castor canadensis* has improved the area for breeding ducks over the past decade.

(b) Surrounding Area: Mainly agricultural land uses.

Threats to Integrity of:

(a) Site: The site is situated just downstream from the heavily industrialized portion of the St. Lawrence (extending from Quebec City to the Great Lakes) and therefore remains vulnerable to the effects of toxic substances. Pollution from oil spills would be difficult to control due to the high tides. Increasing numbers of Greater Snow Geese have led to a depletion of *Scirpus* rhizomes which may eventually cause a deterioration of the marsh at Cap Tourmente.

(b) Surrounding Area: Rural land use development continues in surrounding areas.

Status of Management Plan: The *Plan de gestion de la Réserve nationale de faune du cap Tourmente* for this National Wildlife Area was released in 1986.

Management Authority:

Canadian Wildlife Service
Quebec Region
Environment Canada
C.P. 10 100
Ste-Foy, Quebec
G1V 4H5

LAC SAINT-FRANÇOIS NATIONAL WILDLIFE AREA, QUEBEC

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: The area is partially federal Crown land (1 347 ha) owned by the Canadian Wildlife Service; the remaining 867 ha of open navigable waterway is undeeded but under federal jurisdiction.

(b) Surrounding Area: Mainly private lands and Indian Reserve lands.

Conservation Measures Taken: The area was designated as a National Wildlife Area on 27 April 1978 under the National Wildlife Area Regulations and the *Canada Wildlife Act* of 1973.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: Only activities compatible with national wildlife area objectives are permitted. All other land use is rigorously controlled. Important improvements have increased the area of free water in marshes and their use by waterfowl during migration and the nesting season. Access by the public is limited but wildlife observation is permitted.

(b) Surrounding Area: Mainly agricultural land uses.

Threats to Integrity of:

(a) Site: Fertilizers and herbicides carried from agricultural land through the drainage network could affect the water quality. Little is known of the impact on flora and fauna from acid precipitation; the mean annual pH for this region is 4.2. Once a common practice, the burning of dry grass in the swamps in the springtime, is no longer permitted.

(b) Surrounding Area: Rural land use development continues in surrounding areas.

Status of Management Plan: The *Plan de gestion de la Réserve nationale de faune du lac Saint-François* for this National Wildlife Area was released in 1986.

Management Authority:

Canadian Wildlife Service
Quebec Region
Environment Canada
C.P. 10 100
Ste-Foy, Quebec
G1V 4H5

ATLANTIC REGION

MARY'S POINT, NEW BRUNSWICK

Jurisdiction: Federal - Environment Canada; Provincial - New Brunswick Department of Natural Resources and Energy.

Land Tenure:

(a) Site: The Government of Canada owns 107 ha which includes the most critical sites used by the large roosting flocks of shorebirds during high tide. Most of the 150 ha of salt marsh remains under private ownership as poor land titles have prevented purchase by the federal government. The remaining 940 ha (approximately) of intertidal mudflats are undeeded but under the jurisdiction of the province of New Brunswick.

(b) Surrounding Area: The site is bounded on three sides by waters of the Bay of Fundy. Uplands immediately adjacent to the site on the western side are privately owned. The most critical adjacent parcels next to the end of the beach are owned by avid conservationists.

Conservation Measures Taken: The 107 ha owned by the federal government have been declared a unit of the Shepody National Wildlife Area, and is scheduled under and controlled by the National Wildlife Area Regulations under the *Canada Wildlife Act*. On August 7, 1987 all of Mary's Point and the adjacent Shepody Bay were declared a Hemispheric Shorebird Reserve under the Western Hemisphere Shorebird Reserve Network.

Conservation Measures Proposed: Further securement of the salt marshes and improved regulation and control of human use of the beach at high tide is needed.

Current Land Use/Activities in:

(a) Site: A 20 ha controlled waterfowl impoundment was constructed by Ducks Unlimited Canada in 1979 at a site adjacent to the salt marsh. Future management of the impoundment may involve vegetation control via tidal flooding and possible maintenance of slightly brackish conditions within the impoundment. The portion of the site presently designated as a national wildlife area is posted with identification signs and there is an observation deck overlooking the beach. A naturalist is employed seasonally through the cooperation of the New Brunswick Federation of Naturalists to advise visitors on the biological values of the area and its sensitivity.

(b) Surrounding Area: Private dwellings, woodlots and open fields.

Threats to Integrity of:

(a) Site: The possibility of a major alteration at the site due to the installation of a tidal barrage for power generation remains a potential threat. The Mary's Point area is considered the least economic of the three prime sites that were studied in the early 1970s for tidal power installation in the Bay of Fundy. Recreational use of all-terrain vehicles along the beach occasionally causes disturbance to the roosting flocks and the number of visitors needs to be regulated to keep disturbance to a minimum.

(b) Surrounding Area: There is little change expected in rural land use of the surrounding private lands. Increasing use of the Mary's Point site by naturalists may lead to development of private, tourism-associated projects but these are not likely to impact the integrity of the site.

Status of Management Plan: The portion of this Ramsar site within Shepody National Wildlife Area is managed under the *Shepody National Wildlife Area Management Plan* which was released in August 1984.

Management Authority:

Canadian Wildlife Service
Environmental Conservation Branch
Atlantic Region
Environment Canada
Box 1590
Sackville, New Brunswick
E0A 3C0

SHEPODY BAY, NEW BRUNSWICK

Jurisdiction: Provincial - New Brunswick Department of Natural Resources and Energy; Private.

Land Tenure:

(a) Site: The site is principally open water and exposed beach and is, thus, undeeded and under the jurisdiction of the province of New Brunswick. The salt marshes, which were previously drained and used for agriculture, have been abandoned; present ownership is unknown. Grindstone Island within the bay is owned by the Anglican Church of Canada. Environment Canada owns a small cabin and a 0.25 ha lot at the most critical portion of beach habitat.

(b) Surrounding Area: Most of the surrounding upland is under private ownership. A small provincial park, "The Rocks," abuts the site at Hopewell Cape.

Conservation Measures Taken: Shepody Bay, along with two other sites (Mary's Point and Minas Basin) in the upper Fundy region collectively form the Bay of Fundy Western Hemisphere Shorebird Reserve. The site is unprotected. However, it does abut the Mary's Point Unit of Shepody National Wildlife Area, which is protected under federal jurisdiction.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) Site: There are no specific management practices carried out within this site except for a shorebird banding station operated by Environment Canada.

(b) Surrounding Area: Consists of farms, woodlots, open fields, and cottages. There has been very little change in land use around the bay in the past 20 years.

Threats to Integrity of:

(a) Site: There is a possibility of the establishment of a tidal power barrage at the mouth of Shepody Bay.

(b) Surrounding Area: There is a proposal for the development of a scenic coastal highway, "The Fundy Trail," which would use existing highways on both the west and east sides of the bay; this would undoubtedly bring additional tourists to the area and possibly more seasonal tourism developments.

Status of Management Plan: A management plan for the site, which will recommend securement for a number of key habitats, is currently being drafted. A *Protection Plan for the Western Hemispheric Shorebird Reserve and Ramsar Wetland of International Importance at the Grande Anse (Johnson's Mills) Section of the Shepody Bay Reserve, Bay of Fundy, New Brunswick, Canada* was released in draft form in mid-1994. At low tide, this covers about 2 000 ha of critical intertidal mud and sand flats of Dorchester Cape.

Management Authority: The site is under the authority of the Government of New Brunswick. The Rocks Provincial Park is a 72 ha protected area abutting the site.

Wildlife Branch
New Brunswick Department of Natural Resources and Energy
P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1

TABUSINTAC LAGOON AND RIVER ESTUARY, NEW BRUNSWICK

Jurisdiction: Provincial - New Brunswick Department of Natural Resources and Energy.

Land Tenure:

(a) Site: The site consists primarily of subtidal and intertidal flats which are undeeded. The Tabusintac Black Lands are partly provincial Crown land.

(b) Surrounding Area: Mainly private holdings and provincial Crown land.

Conservation Measures Taken: Part of the site at the mouth of the Tabusintac River is posted as a protected area (to be closed to hunting of migratory birds, although trapping will be permitted).

Conservation Measures Proposed: Part of the Black Lands (about 124 ha) are currently being considered for designation as a provincial Ecological Reserve. There may be a need to manage gull populations for the benefit of nesting terns on Tabusintac Bar.

There exists a proposal for securing the entire barrier beach and additional habitat for the nearby Great Blue Heron colony and Osprey nesting areas. This would be undertaken through a proposed project of the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan. In addition to land acquisition, this proposal outlines the promotion of stewardship among shoreline owners to secure these habitats through landowner agreements.

Current Land Use/Activities in:

(a) Site: Hunting of migratory birds is presently permitted; however, restrictions prohibit hunting after 1:00 p.m. local time.

(b) Surrounding Area: Peat harvesting and agricultural lands abut the site.

Threats to Integrity of:

(a) Site: The sand bars are highly disturbed by clam diggers, picnickers, fishermen, and users of all-terrain vehicles. Several seasonal-use cabins have been erected on the barrier beach islands.

(b) Surrounding Area: Adjacent parts of the Crown-owned Black Lands is currently harvested for peat.

Status of Management Plan: The Government of New Brunswick is developing a management plan for this Ramsar site.

Management Authority:

Wildlife Branch
New Brunswick Department of Natural Resources and Energy
P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1

GRAND CODROY ESTUARY, NEWFOUNDLAND

Jurisdiction: Provincial - Newfoundland Department of Environment and Lands.

Land Tenure:

(a) Site: The area is undeeded but under the jurisdiction of the province of Newfoundland.

(b) Surrounding Area: The surrounding uplands are privately owned except for the 24 ha Codroy Valley Provincial Park.

Conservation Measures Taken: Since 1974 the entire site, including the surrounding upland, has been closed to hunting by a provincial Order-in-Council known as the Hunting Prohibition Order.

Conservation Measures Proposed: Since 1990, there have been on-going discussions with local landowners concerning protection for this area. The recommendations under the *Grand Codroy Estuary Wetlands Conservation Plan* call for the securement of key habitat sites and entering into "goodwill" (e.g. stewardship) agreements with private landowners who border the Ramsar site.

Current Land Use/Activities in:

(a) Site: An annual waterfowl banding station is operated during September and early October. More than 500 ducks are annually trapped and banded at this site.

(b) Surrounding Area: The surrounding land is a pastoral rural landscape with mixed farming activities and private homes.

Threats to Integrity of:

(a) Site: Further development of the upland fringe could alter patterns of waterfowl use and there are concerns over siltation in the estuary.

(b) Surrounding Area: Cottage development and other land use practices such as spring burning could impact wildlife use of the site.

Status of Management Plan: In 1992, the *Grand Codroy Estuary Wetlands Conservation Plan* was drafted as part of the land stewardship initiatives of the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan.

Management Authority:

Wildlife Division
Newfoundland Department of Environment and Lands
Building 810, Pleasantville
St. John's, Newfoundland
A1A 1P9

CHIGNECTO NATIONAL WILDLIFE AREA, NOVA SCOTIA

Jurisdiction: Federal - Environment Canada.

Land Tenure:

(a) Site: The area is federal Crown land.

(b) Surrounding Area: The surrounding uplands adjacent to the John Lusby section consist of open farmland and is all under private ownership. The Amherst Point Sanctuary is bounded by privately-held lands and by property owned by the Domtar Chemical Company.

Conservation Measures Taken: 1 020 ha are designated as a National Wildlife Area under the National Wildlife Area Regulations of the *Canada Wildlife Act* of 1973. The Amherst Point section (433 ha) is scheduled as a migratory bird sanctuary under the Migratory Birds Sanctuary Regulations of the *Migratory Birds Convention Act*.

Conservation Measures Proposed: The management plan for this site is to be updated.

Current Land Use/Activities in:

(a) Site: Ongoing management is designed to protect the unique ecological and aesthetic features of the area to maintain habitat diversity and to educate visitors.

(b) Surrounding Area: Farms, woodlots, and private homes surround the site. The Domtar Chemical Company operates a salt extraction plant on an adjacent site and also owns an abandoned gypsum quarry.

Threats to Integrity of:

(a) Site: Urban expansion around the town of Amherst will increase recreational use pressures on the site, but is not expected to cause serious damage. The site is regulated by the Wildlife Area Regulations of the *Canada Wildlife Act*. The possibility of development of a major tidal power installation on Cumberland Basin is potentially a serious threat to the salt marsh section of the wildlife area. Should a tidal barrage ever be developed across Cumberland Basin, tidal amplitudes will be reduced greatly changing the ecology of the John Lusby Salt Marsh.

(b) Surrounding Area: Changing land use from farms and woodlots to housing developments is an increasing threat to the integrity of this Ramsar site. The main line of the Canadian National Railway forms the eastern boundary of the site. A Domtar Chemical Company salt plant and possible quarry operations remain nearby.

Status of Management Plan: The *Chignecto National Wildlife Area Management Plan* was released by Environment Canada in August 1984.

Management Authority: The site is managed by the Environmental Conservation Branch, Atlantic Region, Environment Canada in cooperation with the province of Nova Scotia and with development assistance from Ducks Unlimited Canada.

Canadian Wildlife Service
Environmental Conservation Branch
Atlantic Region
Environment Canada
Box 1590
Sackville, New Brunswick
E0A 3C0

MUSQUODOBOIT HARBOUR OUTER ESTUARY, NOVA SCOTIA

Jurisdiction: Provincial - Nova Scotia Department of Natural Resources.

Land Tenure:

(a) Site: Martinique Beach Provincial Park and Martinique Beach Game Sanctuary are administered by the province of Nova Scotia. The upland islands are largely in private ownership as is a small portion of the salt marsh. The remaining area is intertidal land with unknown ownership.

(b) Surrounding Area: Private holdings.

Conservation Measures Taken: The province of Nova Scotia owns the 60 ha Martinique Beach Provincial Park. The backshore of the park abuts in part the provincially-declared Martinique Beach Game Sanctuary.

Conservation Measures Proposed: Securement of key habitat sites will be done through the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan.

Current Land Use/Activities in:

(a) Site: The park provides a controlled, maintained gravel road access to designated and controlled parking sites along the first half of the beach. A boat launch is maintained for use by clam diggers, hunters and bird-watchers. Recreational and regulated commercial clamming at present levels are compatible with the management of the area.

(b) Surrounding Area: Private homes, cottages and woodlots.

Threats to Integrity of:

(a) Site: Recreational use is approaching the acceptable maximum and will have to be maintained at near present levels. The principal threat to the area is the erosion of the sand dune that protects the western arm from the open ocean. Development of the surrounding uplands and islands could pose a threat to this area's integrity.

(b) Surrounding Area: Additional housing units on privately held lands.

Status of Management Plan: Portions of this Ramsar site are, or are proposed as, project areas under the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan. A management plan for this area is currently under development.

Management Authority:

Wildlife Division
Nova Scotia Department of Natural Resources
136 Exhibition Street
Kentville, Nova Scotia
B4N 4E5

SOUTHERN BIGHT - MINAS BASIN, NOVA SCOTIA

Jurisdiction: Federal - Environment Canada; Provincial - Nova Scotia Department of Natural Resources.

Land Tenure:

(a) Site: The majority of the site is inter- or sub-tidal and is thus undeeded. Boot Island (144 ha) is owned by the Government of Canada. Much of the salt marsh area is privately owned.

(b) Surrounding Area: Mostly privately-owned farms and cottages.

Conservation Measures Taken: The only portion of the site that has protected status is Boot Island (144 ha). It is a national wildlife area and activities are controlled by the Wildlife Area Regulations under the *Canada Wildlife Act* of 1973. In 1988, Minas Basin (Southern Bight) was added to Mary's Bay and Shepody Bay, all located in the upper Fundy region, collectively to form the Bay of Fundy Hemisphere Shorebird Reserve under the Western Hemisphere Shorebird Reserve Network.

Conservation Measures Proposed: A draft management plan for this area calls for declaration of the site as a wildlife habitat area, designation of specific beaches, securement of key habitat areas and, possibly, regulation of the bait worm industry.

Current Land Use/Activities in:

(a) Site: Little activity takes place that seriously impacts on the birds or their habitat. However, there is growing concern over the possible long-term effects of an annual bait worm harvest that is exported to the United States salt water sports fishery. Some recreational activity causes disturbance to roosting flocks on Evangeline Beach.

(b) Surrounding Area: Farms, cottages and rural homes.

Threats to Integrity of:

(a) Site: Unregulated harvesting of polycheates for the commercial bait industry is causing local concern. The development of a Fundy Tidal Power barrage at Cobequid Bay would cause tidal changes at this site and possible alteration to siltation patterns.

(b) Surrounding Area: Housing and cottage developments may subject the site to additional recreational pressure.

Status of Management Plan: The *Southern Bight - Minas Basin Management Plan* for the site has been drafted by the province and the Canadian Wildlife Service. It calls for a number of specific actions.

Management Authority: Boot Island is administered by the:

Canadian Wildlife Service
Environmental Conservation Branch
Atlantic Region
Environment Canada
Box 1590
Sackville, New Brunswick
E0A 3C0

MALPEQUE BAY, PRINCE EDWARD ISLAND

Jurisdiction: Partially provincial - Prince Edward Island Department of the Environment. Partially private.

Land Tenure:

(a) Site: As the site is primarily open water and intertidal flats, a large area is undeeded. The coastal sandspit is provincial Crown land and a large portion is owned by the Lennox Island Indian Reserve, while the islands and salt marshes are mostly privately owned. A portion (97 ha) of Courtin Island (Bunbury Island) is owned by the Island Nature Trust. Two provincial parks are present in the area: Green Park (87 ha) and Cabot Park (58 ha). During the 1989 to 1992 period, an additional 60 ha of salt marsh on the eastern side of the bay were acquired under the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan.

(b) Surrounding Area: Mostly private and municipal lands.

Conservation Measures Taken: The *Prince Edward Island Environmental Protection Act* provides specific protection to all wetlands in the province. Two provincial parks are protected habitat within this Ramsar site and the Indian River Wildlife Management Area (316 ha) is a provincially-designated waterfowl management site. Courtin Island (Bunbury Island) has been designated as a provincial natural area.

Conservation Measures Proposed: The Beach Point salt marsh acquired under the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan will be designated a provincial Wildlife Management Area and additional key salt marshes will likely be secured. A number of marshes are being considered for Natural Area designation along with four of the islands within the bay.

Current Land Use/Activities in:

(a) Site: There are no specific management practices being carried out within the site.

(b) Surrounding Area: Farms, open fields and small woodlots with cottage developments are common along coastal points.

Threats to Integrity of:

(a) Site: There are few known threats to this area. However, further development of the upland fringe and increased shellfish farming could alter patterns of waterfowl use of the site.

(b) Surrounding Area: There are no apparent threats to the surrounding areas at this time.

Status of Management Plan: A management plan for the overall Ramsar site is proposed. Some of this area is managed through habitat projects under the North American Waterfowl Management Plan.

Management Authority:

Fish and Wildlife Division
Prince Edward Island Department of the Environment
P.O. Box 2000
Charlottetown, Prince Edward Island
C1A 7N8

THE CONVENTION'S GUIDANCE ON MANAGEMENT PLANNING

At the Fifth Meeting of the Conference of the Contracting Parties held in June 1993, the Ramsar Convention adopted a *Resolution on Management Planning for Ramsar Sites and Other Wetlands* (Resolution No. C.5.7) (the full text of which is included in Appendix 1). This resolution:

- Calls on Contracting Parties to develop management plans for each wetland designated for the Ramsar List;

- Requests Contracting Parties to send copies or examples of such management plans to the Ramsar Bureau, in particular those that relate to sites on the "Montreux Record" [Ramsar sites threatened by natural or human factors degrading the sites' ecological character] or which illustrate good practice and successful approaches;

- Requests Contracting Parties to establish the appropriate legal and administrative structure for the application of such management plans, and to provide funds for the implementation of the plans and for training of necessary staff;

- Requests that, as far as necessary, Contracting Parties apply the *Guidelines on Management Planning for Ramsar and Other Wetland Sites* (see Annex to Resolution C.5.7 in Appendix 1); and,

- Calls on Contracting Parties to consider using these *Guidelines* to review and, where necessary, update existing management plans.

In drafting this Resolution C.5.7 and its attached *Guidelines* as an Annex to the Resolution, the Contracting Parties to the Convention wished to establish a framework and model, particularly for application by Ramsar nations without sophisticated land use planning procedures. For most developed countries, ongoing processes leading to appropriate management planning of protected and ecologically-sensitive areas are widely practised and recognized. This is certainly the case in Canada.

At the present time, about 10.1 million ha (77.8%) of Canada's 13 027 4680 ha of wetlands designated under the Ramsar Convention lie on federal lands and waters and 2.7 million ha (20.2%) lie on provincial lands and waters. The remaining 155 000 ha (1.2%) are on private lands. Over 90% of Canada's Ramsar area is within protected areas (such as national or provincial parks, national wildlife areas, migratory bird sanctuaries and provincial wildlife management areas). The remaining 10% of Canada's Ramsar area lies on sites secured for conservation by non-government and native organizations and government cabinet directives of various kinds.

While the Government of Canada has accepted, on behalf of Canadian Ramsar site managers, a collective commitment to site management plans, the designated lead federal agency

(Canadian Wildlife Service) has no mandate or interest in attempting to impose new management arrangements for Canadian Ramsar sites.

It should be noted that the Convention has presented wording in its Resolution C.5.7 (see Appendix 1) that does not suggest any *imposition* on the site management jurisdictions and authorities. Resolution C.5.7 does not specify any required deadlines for creation of management plans; it only calls on each responsible site management agency to develop a management plan or process leading to such plans.

Resolution C.5.7 does not impose its *Guidelines Annex* as a requirement. The operative language "calls on Contracting Parties to consider these Guidelines ...." In the absence of any environmental management or impact assessment framework, many of the 81 Ramsar Contracting Party nations (as of August 1994) value the guidance provided by the Convention. In countries such as Canada, these *Guidelines* are generally superseded by more rigorous or comprehensive procedures leading to management plans or strategies tailored to the political and environmental realities existing in that area of Canada. In northern Canada in areas affected by land claims, management plans are expected to be created once operative legislation or agreements are ratified by all parties.

A ZONATION/PROTECTION RECOMMENDATION OF THE CONVENTION

A further recommendation of the Fifth Meeting of the Conference of the Contracting Parties to the Ramsar Convention focuses on land use zonation in protected wetland sites. Recommendation C.5.3 (as distinct from the Convention's "Resolutions") (see Appendix 2 for a full text):

- Recommends that the essential character of wetlands be recognized and that measures ... be taken to ensure that the ecological character of Ramsar sites ... is not placed at risk.

- Emphasizes the need to develop zoning measures related to larger Ramsar sites ... involving strict protection in key zones and various forms of wise use ... in other zones ....

- Calls for the establishment of strict protection measures for Ramsar sites ... of small size or particular sensitivity.

Most of Canada's Ramsar sites in fact already have seen implementation of Recommendation C.5.3. Through management plans in national wildlife areas, national and provincial parks and other federal, provincial and territorial wildlife management areas, regulatory powers, sensitive areas zonation and general ecosystem protection are in place.

ANALYSIS OF THE STATUS OF CANADIAN RAMSAR SITE MANAGEMENT PLANS

As of April 1994, 13 of Canada's 32 Ramsar sites have management plans in place that generally comply with Resolution C.5.7 of the Ramsar Convention (see Appendix 1) and likely meet the majority of suggested factors in the *Guidelines* Annex to that Resolution. Such management plans in Canada usually include extensive consideration of the need for land use zonation to promote the securement of sensitive areas within Ramsar sites (Recommendation C.5.3, see Appendix 2). The Canadian Ramsar sites with management plans in place include:

- Alaksen, British Columbia
- Creston Valley Wildlife Management Area, British Columbia
- Beaverhill Lake, Alberta
- Polar Bear Pass National Wildlife Area, Northwest Territories
- Long Point, Ontario
- Point Pelee National Park, Ontario
- St. Clair National Wildlife Area, Ontario
- Polar Bear Provincial Park, Ontario
- Baie de Isle-Verte National Wildlife Area, Quebec
- Cap Tourmente National Wildlife Area, Quebec
- Lac Saint-François National Wildlife Area, Quebec
- Mary's Point, New Brunswick
- Chignecto National Wildlife Area, Nova Scotia

Two Ramsar sites also have active water and wildlife management programs with resident marsh management staff on-site working within long-range management objectives:

- Delta Marsh, Manitoba
- Oak Hammock Marsh Wildlife Management Area, Manitoba

These 15 sites in Canada cover 21% of Canada's total designated Ramsar area.

A further eleven Canadian Ramsar sites have ongoing developmental and consultation initiatives that are leading to draft management plans; however, two of these represent updating or recrafting of previously adopted management plans. Hence, the nine additional sites in this group cover 16% of Canada's designated Ramsar area. Additional Ramsar sites are under consideration by management authorities to update existing plans. The Ramsar sites in this category include:

Revisions:

- Alaksen National Wildlife Area and Migratory Bird Sanctuary, British Columbia
- Creston Valley Wildlife Management Area, British Columbia

New:

- Peace-Athabasca Delta, Alberta
- Whooping Crane Summer Range, Alberta/Northwest Territories
- Last Mountain Lake Migratory Bird Sanctuary, Saskatchewan
- Quill Lakes, Saskatchewan
- Tabusintac Lagoon and River Estuary, New Brunswick
- Shepody Bay, New Brunswick
- Grand Codroy Estuary, Newfoundland
- Musquodoboit Harbour Outer Estuary, Nova Scotia
- Southern Bight - Minas Basin, Nova Scotia

In four Ramsar sites, covering 52% of the total area covered by Ramsar designation in Canada in the Yukon, Northwest and Nunavut (to be declared in 1999) Territories, a legal commitment now exists to proceed with creation of management plans for completion within the next 10 years. These involve implementation of land claims and/or promulgation of specific legislation. Several sites will see management plans initiated as a result of their designation under federal or territorial legislation as protected or other special or cooperative management areas. This affects the following Ramsar sites:

- Old Crow Flats, Yukon Territory
- Dewey Soper Migratory Bird Sanctuary, Northwest Territories
- McConnell River Migratory Bird Sanctuary, Northwest Territories
- Queen Maud Gulf Migratory Bird Sanctuary, Northwest Territories

The four Ramsar sites listed below, covering about 11% of the total area covered by Ramsar designation in Canada, do not yet have a management plan in place. Rasmussen Lowlands it should be noted may be proposed for designation as a National Wildlife Area. Should this occur, a similar process as with other protected areas affected by the *Nunavut Land Claim Agreement* would lead to preparation of a management plan within five years of designation of this area.

- Hay-Zama Lakes, Alberta
- Southern James Bay Migratory Bird Sanctuaries, Ontario/Northwest Territories
- Malpeque Bay, Prince Edward Island
- Rasmussen Lowlands, Northwest Territories

Hence, a total of 28 of Canada's 32 Ramsar sites have management plans or programs in place, under revision, being renewed, or scheduled under legislative requirement.

Table 2: Status of Management Plans for Canadian Ramsar Sites

Site Name	Management Plan Yes/No, Year Created?	Management Plan or Revision in Preparation Yes/No, Year Initiated?	Management Plan Required Yes/No, By What Year?	Management Staff on Site?
Alaksen BC	Yes, April 1986	Yes, January 1993	---	Yes
Creston Valley BC	Yes, November 1985	Yes, October 1993	---	Yes
Old Crow YK	No	Yes, Winter 1993-94	1999	No
Beaverhill Lake AB	Yes, 1981	---	---	No
Hay-Zama Lakes AB	No	No	No	No
Peace Delta AB/NWT	No	Yes, area in park, August 1993	---	Yes, in Park
Whooping Crane Rg. AB/NWT	No	Yes, area in park, August 1993	---	Yes, in Park
Last Mt. Lake SK	No	Yes, November 1993	---	Yes
Quill Lakes SK	No	Yes	July 1995	Portions under NAWMP
Delta Marsh MB	Partly (Lake Francis)	No	No	Yes
Oak Hammock MB	Some (specific aspects)	No	No	Yes
Dewey Soper NWT	No	No	2004	No

Site Name	Management Plan Yes/No, Year Created?	Management Plan or Revision in Preparation Yes/No, Year Initiated?	Management Plan Required Yes/No, By What Year?	Management Staff on Site?
McConnell River NWT	No	No	2004	No
Queen Maud Gulf NWT	No	No	2004	No
Polar Bear Pass NWT	Yes, February 1990	---	---	No
Rasmussen NWT	No	No, but proposed as a National Wildlife Area	No	No
Long Point ON	Mostly - Long Point NWA 1983; Big Creek NWA 1984	---	---	Yes
Point Pelee ON	Yes, 1982	---	---	Yes
St. Clair ON	Yes, 1982	---	---	Yes
Polar Bear Park ON	Yes, Planning Proposal - 1977	Yes, 1994	---	No
S. James Bay ON/NWT	No	No	---	No
L'Île-Verte QB	Yes, April 1986	---	---	No
Cap Tour-mente QB	Yes, April 1986	---	---	Yes
Lake Saint-François QB	Yes, April 1986	---	---	No
Mary's Point NB	Portion in Shepody NWA only, 1984	---	---	No

Site Name	Management Plan Yes/No, Year Created?	Management Plan or Revision in Preparation Yes/No, Year Initiated?	Management Plan Required Yes/No, By What Year?	Management Staff on Site?
Shepody Bay NB	No	Yes, portion 1994	---	No
Tabusintac NB	No	Yes, June 1993	---	No
Chignecto NS	Yes, 1984	---	---	No
Musquodoboit NS	No	Yes, 1994	---	No
Southern Bight NS	No	Yes, 1994	---	No
Malpeque Bay PEI	No	No, proposed for 1995	---	No
Grand Codroy NF	No	Yes, EHJV Plan, 1993	---	No
32 sites in total	13 sites, management plan in place; two sites with on-site program	11 (9 new) sites, management plan in progress	4 sites, management plan scheduled under legislation	

CONCLUSIONS

Canada is well advanced in implementing Resolution C.5.7 and Recommendation C.5.3 developed by the Fifth Meeting of the Conference of the Contracting Parties to the Ramsar Convention. Over 90% of our Ramsar designated area in 32 sites lies within federal, provincial or territorial protected areas. A total of 15 such sites covering 21% of the Ramsar designated area have management plans or on-site programs in place; a further nine sites covering 16% of the Ramsar designated area in Canada are in the process of completing such plans and an additional four sites covering 52% of the designated Ramsar area in our northern territories have a legislative requirement to see these plans completed in the next ten-year period. Collectively, 28 sites covering over 89% of Canada's designated Ramsar area now have, or are in a process of implementing or developing, management plans. Four Canadian Ramsar sites, covering about 11% of the total Ramsar designated area, do not yet have management plans under development or in place.

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APPENDIX 1: LIST OF MANAGEMENT PLANS FOR CANADIAN RAMSAR SITES

PACIFIC AND YUKON REGION

- *Management Plan: Alaksen National Wildlife Area and George C. Reifel Migratory Bird Sanctuary*. April 1986. Canadian Wildlife Service, Environment Canada. Delta, British Columbia. 26 p. and appendices.

- *Revised Management Plan Alaksen National Wildlife Area*. May 1993. Canadian Wildlife Service, Environment Canada. Delta, British Columbia. K. Summers and G. Runka. Draft. 25 p. and appendices.

- *Alaksen National Wildlife Area: Agricultural Management Plan*. May 1993. Draft. Canadian Wildlife Service, Environment Canada. Delta, British Columbia. 20 p. and appendices.

- *Alaksen National Wildlife Area: Integrated Management Plan for Wildlife and Agriculture*. May 1993. Canadian Wildlife Service, Environment Canada. Delta, British Columbia. 56 p. and appendices.

- *Creston Valley Wildlife Area, A Strategic Plan - the Next 25 Years*. October 1993. Draft Report. Creston Valley Wildlife Area Management Authority. Creston, British Columbia. 17 p.

PRAIRIE AND NORTHERN REGION

- *Beaverhill Lake Integrated Resource Plan*. 1981. Alberta Department of Forests, Lands and Wildlife. Edmonton, Alberta.

- *A Draft Resource Management Plan for the Last Mountain Lake National Wildlife Area and Migratory Bird Sanctuary*. 1994. Environmental Conservation Branch, Environment Canada. Edmonton, Alberta.

- *Interpretive Plan for Oak Hammock Marsh Interpretive Centre and Wildlife Management Area*. August 1991. Ducks Unlimited Canada and Manitoba Department of Natural Resources. Winnipeg, Manitoba. 111 p.

- *Peace-Athabasca Ecosystem Management Plan*. January 1993. Project Plan for Three-Year Program of Technical Study. Parks Canada. Fort Smith, Northwest Territories.

- *Polar Bear Pass National Wildlife Area Management Plan*. February 1990. Canadian Wildlife Service and Polar Bear Pass Advisory Committee. Environment Canada. Edmonton, Alberta. 24 p.

- *Wood Buffalo National Park Ecosystem Conservation Plan*. August 1993. Parks Canada. Resource Management Report 93-06/WB. Draft. Fort Smith, Northwest Territories.

- *Wood Buffalo National Park Draft Management Plan*. November 1993. Parks Canada. Fort Smith, Northwest Territories. 34 p.

ONTARIO REGION

- *Big Creek National Wildlife Area Management Plan*. 1984. Canadian Wildlife Service, Environment Canada. London, Ontario.

- *Long Point National Wildlife Area Management Plan*. March 1983. G. McKeating. Canadian Wildlife Service, Environment Canada. London, Ontario. 73 p.

- *Point Pelee National Park Management Plan*. 1982. Canadian Parks Service, Environment Canada. Ottawa, Ontario.

- *Polar Bear Provincial Park Planning Proposal*. 1977. Ontario Ministry of Natural Resources. Cochrane, Ontario.

- *Management Plan St. Clair National Wildlife Area*. August 1982. G. McKeating and P. Madore. Canadian Wildlife Service, Environment Canada. London, Ontario. 46 p. and appendices.

QUEBEC REGION

- *Plan de gestion de la Réserve nationale de faune du cap Tourmente*. 1986. Y. Mercier, L-G. de Repentigny, and I. Ringuet. Canadian Wildlife Service, Environment Canada. Ste-Foy, Quebec. 51 p., appendices and map.

- *Plan de gestion de la Réserve nationale de faune de la baie de L'Isle-Verte*. May 1986. Y. Mercier, L-G. de Repentigny, and I. Ringuet. Canadian Wildlife Service, Environment Canada. Ste-Foy, Quebec. 37 p. and map.

- *Plan de gestion de la Réserve nationale de faune du lac Saint-François*. 1986. Y. Mercier, L-G. de Repentigny, and I. Ringuet. Canadian Wildlife Service, Environment Canada. Ste-Foy, Quebec. 53 p. and map.

ATLANTIC REGION

- *Chignecto National Wildlife Area Management Plan*. August 1984. Canadian Wildlife Service, Environment Canada. Sackville, New Brunswick. P. Barkhouse. 41 p. and maps.

- *Grand Codroy Estuary Wetlands Conservation Plan*. 1992. Eastern Habitat Joint Venture. North American Waterfowl Management Plan. Government of Newfoundland and Labrador. St. John's, Newfoundland.

- *Shepody Bay National Wildlife Area Management Plan*. August 1984. P. Barkhouse. Canadian Wildlife Service, Environment Canada. Sackville, New Brunswick. 30 p., maps and appendices.

- *Protection Plan for the Western Hemispheric Shorebird Reserve and Ramsar Wetland of International Importance at the Grande Anse (Johnson's Mills) Section of the Shepody Bay Reserve, Bay of Fundy, New Brunswick, Canada*. 1994. Canadian Wildlife Service, Environment Canada and New Brunswick Department of Natural Resources and Energy. Sackville, New Brunswick. 14 p. and appendix.

- *Southern Bight - Minas Basin Draft Management Plan*. 1994. Environment Canada and Nova Scotia Department of Natural Resources. Kentville, Nova Scotia.

APPENDIX 2: RAMSAR CONVENTION RESOLUTION C.5.7 ON MANAGEMENT PLANNING FOR RAMSAR SITES AND OTHER WETLANDS

CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT

RESOLUTION C.5.7

Fifth Meeting of the Conference of the Contracting Parties
Kushiro, Japan: 9-16 June 1993

RECALLING that Contracting Parties to the Ramsar Convention designate wetlands within their territory for the "List of wetlands of international importance," and formulate and implement their planning so as to promote the conservation of listed sites;

AWARE of the need to take appropriate measures after designation so as to promote the conservation of listed sites, as indicated in Annex II to Montreux Recommendation 4.2, which states that "at each listed wetland, consideration should be given to the need for management" and that "if management measures are deemed appropriate, a management plan should be developed and put into action;"

EMPHASIZING the need for each Ramsar site to have its own management plan;

NOTING that Contracting Parties also establish nature reserves on other wetlands which are not designated for the Ramsar List;

CONSCIOUS that, while wetlands vary enormously throughout the world, a methodology for management planning, both for Ramsar sites and other wetlands can provide guidance for Contracting Parties;

NOTING FURTHERMORE that management planning should aim to achieve a balance between conservation and utilization, and should reinforce the Convention's "wise use" principles;

WELCOMING the initiatives taken by some Contracting Parties to develop methodologies of general relevance and the efforts already made to test their validity;

THE CONFERENCE OF THE CONTRACTING PARTIES:

CALLS ON Contracting Parties to develop management plans for each wetland designated for the Ramsar List;

REQUESTS Contracting Parties to send copies of examples of such management plans to the Ramsar Bureau, in particular those that relate to sites on the "Montreux Record" or which illustrate good practice and successful approaches;

REQUESTS Contracting Parties to establish the appropriate legal and administrative structures for the application of such management plans, and to provide funds for the implementation of the plans and for training of the necessary staff;

FURTHER REQUESTS that, as far as necessary, Contracting Parties apply the *Guidelines on Management Planning for Ramsar and Other Wetland Sites*, attached as an annex to the present resolution;

CALLS ON Contracting Parties to consider using these guidelines to review and, where necessary, update existing management plans;

REQUESTS the Standing Committee and the Scientific and Technical Review Panel, in collaboration with the Convention Bureau and partner organizations, to follow up practical application of these guidelines at specific sites and to consider the need for refinement of these guidelines in the light of experience; and

URGES that funds be made available, from multilateral or bilateral aid sources, through non-governmental channels or from the Convention's Wetland Conservation Fund for the preparation of management plans and the application of these guidelines at wetlands in developing countries.

ANNEX TO RESOLUTION C.5.7 - GUIDELINES ON MANAGEMENT PLANNING FOR RAMSAR SITES AND OTHER WETLANDS

INTRODUCTION

(i) General

Wetlands are dynamic areas, open to influence from natural and human factors. In order to maintain their biological diversity and productivity and to allow wise use of their resources by human beings, some kind of overall agreement is needed between the various owners, occupiers and interested parties. The management planning process provides this overall agreement.

When developing management planning, which will be applied to all wetlands and not just to reserves, the following considerations should be taken into account:

- Management planning is a way of thinking which involves recording, evaluating and planning. It is a process subject to constant review and revision. Management plans should, therefore, be regarded as flexible, dynamic documents.

- It is essential to emphasize that the process described below is very simple. It involves three basic actions - describing, defining objectives, and taking any necessary action. Preparation of an elaborate plan must never be an excuse for inaction or delay. It will be useful to produce a very brief executive summary for decision-makers in order to allow decisions of principle and funding to be taken rapidly.

- Review of the plan may lead to revision of the site description and objectives (particularly the operational objectives). This is illustrated in the diagram appended to the guidelines.

- The management plan itself should be a technical, not a legal document, though it may be appropriate for the principle of a management plan to be supported by legislation.

- An authority should be appointed to implement the management planning process; this may be particularly relevant in a larger site, where there is a need to take account of all interests, uses and pressures on the wetland.

Although conditions vary at individual wetlands, these guidelines may be applied worldwide. It is emphasized that the guidelines are far from constituting the management plan, which will be a much more detailed document. The Ramsar Bureau would welcome comments from

Contracting Parties on the guidelines with a view to producing a more detailed handbook to accompany the guidelines.

(ii) Format

The format of the plan, reflected in these guidelines, should comprise a Preamble, followed by three major sections:

1. Description
2. Evaluation and objectives (i.e. what to do)
3. Action plan/prescriptions (i.e. how to do it)

(iii) Drafting and Approval

Technical staff will participate in the drafting of all three sections of the plan. Sources, bibliographical references and the authorship of individual parts should always be indicated. Policy makers will normally review the first two sections in consultation with technical staff, before approving finance and implementation of section three.

PREAMBLE

The Preamble is a concise policy statement which reflects in broad terms the policies of supranational, national or local authorities, or other organizations (e.g. non-governmental conservation bodies or private owners) concerned with the production and implementation of the management plan. The Preamble should also recall the three broad Ramsar obligations: maintaining the ecological character of listed sites; making wise use of all wetlands; and establishing nature reserves at wetlands, whether or not they are included in the Ramsar List.

PART 1 - DESCRIPTION

This is a basic description of the site, using available information and identifying any gaps. Where appropriate, any gaps will be filled, and the description will be regularly reviewed and updated. It will form a baseline for monitoring programmes, which should identify any subsequent changes at the site. The headings of the *Information Sheet on Ramsar Wetlands* provide a format for the description, though in most cases there will be a need for more detailed data. If the plan is to be published, sensitive data on rare species should remain confidential.

PART 2 - EVALUATION AND OBJECTIVES - WHAT TO DO

2.1 Evaluation

Evaluation means the assessment of the major features of the site, and is applied to the foregoing description. (It should not be confused with the Ramsar criteria used to identify wetlands for potential designation on the Ramsar List). The evaluation process may use the following

headings (which are not listed in any order of priority and which will vary in relevance from site to site); they may be used individually or as a whole.

- Size and position in ecological unit: the best possibilities for planning exist where the site constitutes a complete ecological unit, preferably a whole catchment. Smaller sites must take account of factors in the catchment beyond their own strict limits.

- Biological diversity: is related to wetland type and also, in many cases, to size. Sites with great natural diversity are most highly valued, but some wetlands (e.g. some peat bogs) have low diversity even in a natural state.

- Naturalness: from a conservation point of view, this will be the most important feature in evaluation, even though modified and artificial sites may have conservation value.

- Rarity: conservation sites are often selected on the basis of the rare species, communities, habitats, landforms or landscape features they contain. The degree of rarity and the reasons for this rarity need to be considered.

- Fragility: fragility may be natural (fire, flood, drought, storms) or man-induced. Both aspects should be considered.

- Typicalness: consideration should be given not only to rare or exceptional features, but to the best examples of a particular habitat that may be typical or common in a region.

- Recorded history, including archaeological or paleoenvironmental values e.g. pollen, seeds: important for an understanding of past management (whether for human use or conservation), which can guide future action.

- Potential for improvement: sites of high quality have little potential for improvement. Evaluation must consider whether the potential value of lower quality sites justifies the use of scarce resources.

- Aesthetic, cultural and religious value: will include landscape values, but also cultural or religious significance.

- Social and economic value: will include values such as sediment and erosion control; maintenance of water quality and abatement of pollution; maintenance of surface and underground water supply; support for fisheries, grazing, forestry and agriculture; and contribution to climatic stability.

- Education and Public Awareness: covers potential for environmental education for students, decision-makers and the general public.

- Recreation: important to ensure that recreational use is compatible with conservation objectives.

- Research/study: important for development of a basis for taking decisions on management, but fragility of site and vulnerability to researchers must be taken into account.

2.2 Long-term management objectives

These are a concise expression of intent, derived from the evaluation process and unaffected by other considerations. They may be stated in general terms or can be more specific. They will normally refer to the broad policies outlined in the Preamble.

2.3 Factors influencing achievement of long-term management objectives

Once the long-term objectives have been decided, all significant factors which may influence or hinder their achievement should be identified. These factors fall into the following categories:

2.3.1. Internal natural factors: includes natural succession in vegetation, variations in water level caused by precipitation.

2.3.2. Internal human-induced factors: includes spread of invasive alien species, localized erosion, disturbance, pollution.

2.3.3. External natural factors: includes factors arising outside the wetland such as climate change, variations in currents or sea level.

2.3.4. External human-induced factors: includes diversion of water supply, increased sedimentation caused by upstream erosion, pollution.

2.3.5. Factors arising from legislation or tradition: includes legal and traditional rights and obligations placed on the managers of the site. Legal obligations could arise from international, national or local legislation, with national and local laws likely to be the more important; rural planning may also be an important factor; traditional rights could include grazing, hunting, fishing, logging or religious customs.

2.3.6. Physical considerations: includes physical factors such as inaccessibility which may affect the achievement of long-term objectives.

2.3.7. Available resources: includes finance for execution of management tasks and available personpower.

2.3.8. Summary of factors influencing achievement of long-term objectives: a summary of the preceding headings which leads logically to the identification of operational objectives.

2.4 Identification of operational objectives

This part of the process considers the influence of the factors identified under 2.3 on the achievement of long-term objectives, and leads to the formulation of operational (or obtainable) objectives. These may differ quite considerably from the long-term objectives, but should nevertheless point the way towards them (*see Note on limits of acceptable change).

* Limits of acceptable change. The concept of "limits of acceptable change" is a useful tool, widely used to identify and set limits within which change may be tolerated. It may be applied to the long-term or operational objectives. (Examples for wetlands might be maximum or minimum water levels, or maximum or minimum extent of vegetation.) Once these limits are exceeded there will be a need for immediate remedial action. The limits of acceptable change must take account of sustainable yield of natural products, so that harvest rates or fish catches may be determined. Monitoring is implicit and of the greatest importance.

PART 3 - ACTION PLAN/PRESCRIPTIONS - HOW TO DO IT

3.1 Work plan

The operational objectives will lead to the formulation of a work plan. For complex sites, where ownership and activities are diverse, an overall "umbrella" plan for the management of natural resource use and the maintenance of biodiversity should be established in collaboration with all users and interested parties. Within this overall plan, zoning may be appropriate to regulate actions in different parts of the area; each zone may have its own subsidiary plan.

3.1.1 Management options: Management options may be summarized under the following categories (which are not in order of priority):

- Habitat management (including aspects such as hydrology and landscape). Options: non-intervention (which still implies monitoring); limited intervention; active management.
- Species management. Options: non-intervention; control and reduction or eradication; encouragement and increase; re-introduction; introduction (to be used with the greatest care).
- Usage. Options: no usage; traditional usage; usage by human inhabitants which take account of wise use.
- Access. Options: closed; restricted access; partially open access; open access.
- Education, interpretation and communication. Options: no facilities; low key publicity; active publicity; special promotion, including action for decision-makers.
- Research. Options: no facilities; specialized facilities; controlled facilities; open facilities.

3.2 Projects

The general areas of work ("prescriptions") required to achieve the operational objectives are broken down into clearly defined individual units of work called "projects." Each project description will contain, or provide reference to, sufficient information to enable the individuals responsible for the project to complete the work. This will include details of: the staff responsible for the work, when it should be done, how long it should take and how much it will cost. Each project is also allocated a priority and year (or years) when it will be active. Projects are divided under three main headings: records, management and administration.

3.2.1 Records: Records may be subdivided into the following subheadings: archives; physical; flora; fauna; and human activities. Records are vital for the all-important activity of monitoring developments.

3.2.2 Management: Management activities may be subdivided into the following sub-headings: management of habitat; management of species; management of inhabitants; and management of infrastructure (roads, etc.).

3.2.3 Administration: Each project will include an entry on the arrangements for its implementation.

3.3 Work programmes

Collectively, project descriptions are used as the basis for the preparation of a wide range of work programmes. These include: annual work programmes, work programmes for individual staff members and financial programmes.

3.4 and 3.5 Reviews

Finally, reviews are made under the same project headings, detailing the work which has been completed and the results of monitoring and surveys. This information provides the basis for short term, usually annual, and longer term or major reviews. The purpose of the short-term review is simply to confirm that a site is being managed in accordance with the requirements of the plan. The major reviews are applied in order to ensure that the operational objectives are being achieved and that they continue to be relevant. The period between major reviews will depend on a range of factors, notably the dynamics and vulnerability of a site. It will rarely be less than one year and should not exceed 10 years.

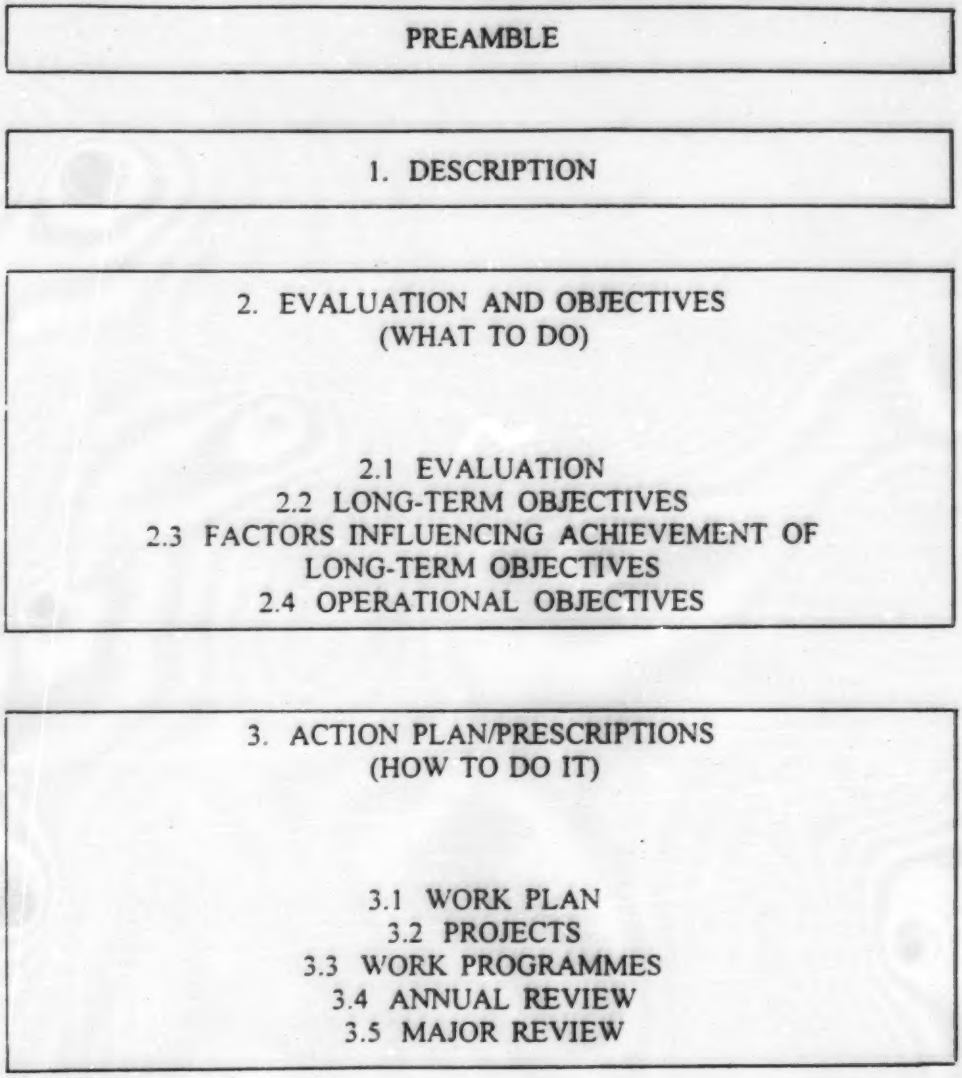

Figure 1: The diagram illustrates the structure of the planning process and demonstrates that review is an integral and essential component of the process.

APPENDIX 3: RAMSAR CONVENTION RECOMMENDATION C.5.3 ON THE ESSENTIAL CHARACTER OF WETLANDS AND THE NEED FOR ZONATION RELATED TO WETLAND RESERVES

CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT

RECOMMENDATION C.5.3

Fifth Meeting of the Conference of the Contracting Parties
Kushiro, Japan: 9-16 June 1993

RECALLING the multiple values and functions of wetlands for sustainable development and the maintenance of biodiversity;

AWARE that wetlands are highly liable to negative impacts from actions occurring outside their designated boundaries (whether such impacts come from upstream, downstream or other sources), and that because of this essential character - as recognized by the Fourth World Congress on National Parks and Protected Areas (Caracas, Venezuela, 1992) and the United Nations Conference on Environment and Development (Rio de Janeiro, Brazil, 1992) - they require particular measures in the field of land-use planning, including integrated management and creation of reserves;

EMPHASIZING that land-use plans need to adopt a catchment approach and to consider the impact on wetland reserves of factors occurring both upstream and downstream;

WELCOMING the measures taken by Contracting Parties to establish wetland reserves on their territory, both in wetlands designated for the Ramsar *List of Wetlands of International Importance* and at other wetlands;

NOTING that the Ramsar concept of wise use for the benefit of human populations is of relevance in relation to Ramsar sites and other wetland reserves;

RECOGNIZING that zonation related to Ramsar sites and wetland reserves must take account of the size and sensitivity of the wetland in question, and that, while strict protection may be the most appropriate form of wise use for smaller or highly sensitive Ramsar sites or wetland reserves, it alone is not always possible in larger sites where other forms of wise use will be appropriate;

THE CONFERENCE OF THE CONTRACTING PARTIES:

RECOMMENDS that the essential character of wetlands be recognized and that measures (notably inclusion of wetland concerns in land-use and water management planning, adoption of a whole catchment approach and/or creation of buffer zones) be taken to ensure that the ecological character of Ramsar sites and wetland reserves is not placed at risk;

EMPHASIZES the need to develop zoning measures related to larger Ramsar sites and wetland reserves, involving strict protection in key zones and various forms of wise use for the benefit of human populations in other zones; and the need to develop ecological corridors linking Ramsar sites; and

CALLS FOR the establishment of strict protection measures for Ramsar sites and wetland reserves of small size or particular sensitivity.